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EDUCAT[illegible]

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EDUCATION.

No. I.—September, 1882.

THE NEW UNIVERSITY AT CLEVELAND.

BY EDWIN D. MEAD.

The visitor to Cleveland, riding out Euclid Avenue to visit the grave of Garfield, passes, four miles from the public square, which is the centre of everything at Cleveland, and about a mile from the entrance to Lakeview Cemetery, between two parks. That on the left, nearest Lake Erie, is Wade Park,—the principal park in the city,—comprising about one hundred acres, and destined to become one of the most beautiful parks in the country. According to the assessors' books, it is the property of Hon. J. H. Wade, the Western Union Telegraph millionaire, and upon a section of it close to Euclid Avenue will probably stand the fine buildings of the new Theological School, which it is understood that Mr. Wade is to endow so richly. Practically, this beautiful park belongs to the people of Cleveland, Mr. Wade simply saving them the trouble and expense of taking care of it.

On the other side of Euclid Avenue, directly opposite Wade Park and extending southward to the range of hills which terminates in Lakeview Cemetery, is another park of forty acres, almost as large as Boston Common. In these fine grounds, in these summer days, there is a little army of masons and carpenters, and the sound of the hammer is busy, and the walls of two large and imposing buildings are rapidly rising. These are the first of the new buildings of the Western Reserve College, which is to be removed to Cleveland from the little town of Hudson sometime during the present year, and which, in this larger field and with its magnificent new endowments, will immediately become one of the most important educational institutions in the whole West, second only, in everything that equips a college, to the University of Michigan at Ann Arbor.

The Western Reserve, this proud little State within a State, is the New England of the West. Conneaut is its Plymouth, Cleveland is its Boston, and the Western Reserve College is its Harvard. It was on the 4th of July, 1796, that General Moses Cleveland and the men from Connecticut, coasting along the shore of Lake Erie from Buffalo, came to Conneaut Creek and took possession of the Western Reserve, giving three cheers, drinking their toasts in the clear water of the lake, and firing a Federal salute of fifteen rounds and then a sixteenth in honor of New Connecticut. Ten years ago, in an address at the founding of some local historical society in one of the counties of the Reserve, General Garfield said: "There are sitting in this audience to-day a few men and women whose memories date back to the early settlement. Here sits a gentleman near me who is older than the Western Reserve. He remembers a time when the axe of the Connecticut pioneer had never awakened the echoes of the wilderness here." And now here stands Cleveland, this magnificent city of almost two hundred thousand people, with her streets of palaces and her business blocks as solid as those of Lombard street, in the midst of the thick villages and broad farms of a ripe civilization; and here are springing into life, fully grown, as in a single night, the three richly endowed institutions which will make Cleveland one of the most important university towns in the country and the greatest center of education in the Middle States.

To the meeting of this society, which Garfield addressed, the citizens brought many rich historical memorials. There were old colonial commissions given to early Connecticut soldiers of the Revolution, who became pioneers of the Reserve; there were church records and other records, dating back to the beginning of the settlements; and there were implements of industry which the pioneers brought with them. "Some of these implements," said Garfield, "are symbols of the spirit and character of the pioneers of the Reserve. Here is a broad-axe brought from Connecticut by John Ford, father of the late Governor of Ohio; and we are told that the first work done with this axe, by that sturdy old pioneer, after he had finished a few cabins for the families that came out with him, was to hew out the timbers for an academy,—the Burton Academy,—to which so many of our older men owe the foundation of their education, and from which sprang the Western Reserve College."

The pioneers of the Western Reserve brought with them their New England ideas about education, and thought a college as necessary to the new civilization as it was to the old civilization in the old home; and they therefore immediately set about establishing it. In 1801, when there could not have been more than 1,500 people in the whole Reserve, a petition was prepared for an act of incorporation for the college. An academy was opened in 1805. The war of 1812, which affected the people of the Western Reserve so seriously, brought everything to a standstill; and it was not until 1826 that the work of building was commenced at Hudson and the college began its work in good earnest.

The Rev. Charles B. Storrs, a brother of the Rev. Richard S. Storrs, of Braintree, Mass., and uncle of the present Dr. Storrs of Brooklyn, was the first president; and associated with him were Beriah Greene and Elizur Wright. Mr. Storrs was a thorough scholar, a man of a calm and philosophic mind, and also of great eloquence; and he and his associates were all men who had great power to attach to themselves and stimulate young men. They were also men of very advanced ideas in regard to all matters of reform. The early period in the life of the college was especially characterized by great moral and religious earnestness. The college entered with the greatest enthusiasm into the temperance reform. The students had a temperance society. They also had,—sad commentary on the times,—a society in furtherance and defence of the seventh commandment; and they agitated these subjects about the country.

The college entered with equal enthusiasm into the abolition movement. When Garrison came out with the *Liberator* in 1829 or 1830, President Storrs immediately joined him earnestly, and so did Greene and Wright. In 1832 and 1833 the college was in a tremendous stir and swell with the anti-slavery agitation. The young men, who became thoroughly aroused with the abolition sentiment, entered into the work and devoted themselves largely to the discussion of the subject, not only among themselves, but in the surrounding towns. The excitement of the time was so great that the health of President Storrs was completely broken down by it. He was compelled to leave the college in June, 1833, and he never returned, but died at Braintree in the autumn of the same year. Greene and Wright were called away to posts of greater importance at the same time. Oberlin College, with its smart program, just then stepped into the field, drawing largely upon the Western Reserve; and the affairs of the college altogether were brought to a very low ebb.

The arrival of President Pierce in 1834 marked the beginning of a new era for the college. President Pierce came to the college in great vigor of health,—standing six feet two, and weighing over two hundred pounds,—with great power and energy as a man. He immediately called to the faculty a remarkably strong body of men, and raised the standard of scholarship in the college to the highest point. There was no higher standard anywhere in the country than in this college during this period. In the earlier days of the college the requirements for admission had been, in Latin and Greek, less than they were at Yale, but in other respects the same. In the latter part of President Storr's administration the students petitioned for still less of the Greek and Latin classics than was set down in the college course. They wanted less of the study of the "heathen writers" and more study of the Bible and Christian writers. This change, it will be remembered, was one of the principal features of the Oberlin program, and indeed was characteristic of the period in all parts of the country. The moral earnestness of the period overtopped intellectual activity. Under President Pierce, however, intellectual activity was greatly stimulated. Among the men whom he gathered around him were Professor Hickok, the distinguished metaphysician, who now lives, full of years and honors, at Amherst, a thinker second, in force and acumen, to Edwards only, among American philosophers; Professor Barrows, who was subsequently called to Andover; Professor Bartlett, now president of Dartmouth College; Professor Loomis, the eminent astronomer; and Professor Seymour, who still lectures on Shakespeare and English literature at the college,—"the equal of Professor Hadley any day," says an old alumnus; "the master of as many tongues as were heard at Jerusalem on the day of Pentecost,"

The present generation, the generation that enjoys the princely munificence of such men as Stone and Case and Wade, and witnesses the growth of the palatial structures in the parks of East Cleveland, cannot well appreciate or even comprehend the sacrifices which the churches and people of the Western Reserve made to sustain their college in the days of its struggles. They lived in log-cabins, without what we esteem the necessaries of life, but "of their penury cast in all they had" to sustain a college which should give to the churches "an educated ministry." The salaries of the professors were small, and everything in the life at Hudson was arranged upon a basis of the most rigorous economy. When one of the new professors called by President Pierce arrived in Hudson, one of the "stalwart" trustees suggested to him that it would injure the college were he to use carpets and curtains in his house. But will our new colleges, with all their luxurious parlors and modern improvements, be able to turn out such a race of men as the carpetless and curtainless generation that reared the Garfields? That is the great question.

President Pierce remained in office twenty years. Toward the close of that period financial troubles came on. The salaries of the professors were not promptly paid, and friction arose between the president and professors, and then between the president and trustees, ending, after years of conflict, in the president's resignation. A good story has come down to us which well illustrates the animus of those days. At one of the meetings of the trustees a committee was sent out to devise some plan of compromise. They could not agree, and others were added to their number, till only the president and three trustees were left. Father P. proposed that a "season of prayer" be had, and the president called on him to pray. He prayed, giving the Lord a history of the college, and praying for deliverance from those whose counsels would destroy it. The president then called on Father C. He prayed, and contradicted all that Father P. had said, and prayed for deliverance from all who fought against the best interests of the college. The president then called on Mr. L., who excused himself, and read the first two or three pages of the records of the college and the 46th Psalm, and then asked the president to pray. The president had the good taste to decline.

President Pierce was succeeded by Rev. H. L. Hitchcock, a native of the Reserve, one of the noblest and most unselfish of men, and eminently a reconciler. He threw himself, with all his enthusiasm and commanding talents, into the work of securing larger endowments, and by his energy and perseverance $175,000 were obtained in Cleveland and other places on the Reserve. But Cleveland was then a place of comparatively little wealth. It was before the day of rolling-mills and railroads and the Brush electric light, and a thousand dollars were almost as difficult to obtain then as a million now. The same old friends had to be resorted to again and again. "We milk the same cows every day," said Dr. Hitchcock, "but our supply never fails."

Dr. Hitchcock gave the best part of his useful life to the work of the college, and was succeeded, upon his death ten years ago, by Rev. Carroll Cutler, the present president, who for ten years previous had occupied the chair of philosophy in the college, coming, like his predecessors, from Yale. The connection of the Western Reserve College with Yale has always been very close. We have spoken of the Western Reserve as the New England of the West, and the Western Reserve College as its Harvard. More strictly, the Western Reserve is New Connecticut, and the college is its Yale. The Ohio college which has had most intimate association with Harvard is Antioch; and it is a little remarkable that just as the Ohio Yale enters upon its strong new life in these fine buildings at Cleveland, the Ohio Harvard has closed its doors, unable to sustain itself.

Dr. Cutler is an able man and popular. He enjoys the confidence of the trustees, and is much beloved by the students. He is a broad and progressive man, and has been a good administrator. But the college has not grown in his hands. The recent graduating classes have averaged only about fifteen in number, and the whole number of students in the college to-day is but seventy-five. It was impossible that it should grow. It had no adequate endowment, its yearly income from all sources not reaching $20,000, and, although it had always maintained a high standard, it was in great danger of sinking out of sight in the appalling ocean of Ohio colleges. That Ohio contains more colleges than all New England, is the proud boast of the extra-patriotic Buckeye and the joke of everybody else. We hear a good deal about these Ohio colleges. Let us look at them. There are thirty-two. Here is a list of them, showing the number of students in each and the yearly income of each from all sources, according to the Ohio School Report for 1880:

Baldwin University,	202	$5,600	Heidelberg College,	179	$6,650
Capital "	70	9,000	Hiram "	209	
Dennison "	167	15,000	Kenyon "	120	
Ohio "	108		Marietta "	142	
Ohio State "	255	40,000	Miama Valley "	37	3,500
Ohio Wesleyan "	611	35,000	Muskingum "	148	4,000
Otterbein "	170	7,000	Mt. Union "	645	20,000
Urbana "	49	6,500	Oberlin "	949	41,831
Wilberforce "	155	6,000	Ohio Central "	82	1,500
Wooster "	335	20,166	Rio Grande "	84	2,000
Antioch College,	96	7,328	Scio "	112	2,500
Beverly "	65	1,500	St. Joseph's "	160	3,800
Buchtel "	166	21,628	St. Xavier's "	223	
Franklin "	100	3,000	Western Reserve "	70	19,000
German Wallace College,	95		Wilmington "	131	3,800
Hebrew Union "	31	40,000	Wittenberg "	157	12,000

It will be seen from this that in 1880 only eight of the Ohio colleges had upwards of two hundred students, and only seven a yearly income of $20,000; and the Western Reserve College was not among these. To so low an ebb had the fortunes of this historical university of the Reserve been reduced. Only five of these institutions are undenominational, the remainder being under the control of the various religious sects. Nine of them belong to the Methodist Church, and there is no sect which is not represented. The Western Reserve College is happily one of the five colleges which are free from sectarian fetters; there is no incubus of that sort to interfere with its new life and its development into a genuine university.

"Most men must be educated near home," said Judge Williamson of Cleveland, at a recent meeting of the Western Reserve alumni, "or not educated at all. Most of them, too, will get an education of some kind, and if good colleges do not give it, poor ones in abundance will be found ready to take advantage of the situation." Ohio itself furnishes the best possible illustration of the truth of the remark. These Ohio institutions, which "outnumber the colleges of all New England," have been, for the most part, nothing more than great academies, and the ambitious young men of Ohio who have wanted a broad and thorough education have mostly gone out of Ohio to get it,—to Harvard and to Yale. It is a noticeable fact that of the great number of Ohio men who have come to the front in the country in these late years, very few have been graduates of the Ohio colleges. Hayes was a Kenyon student,—valedictorian of his class; and Secretary Stanton and John J. Piatt were Kenyon men, though Piatt did not graduate. Pendleton studied at Cincinnati College, under Mitchell; and Schenck and Whitelaw Reid are Miami men, Reid having borne off the highest honors of the college. But these are all. Chief-Justice Chase was a graduate of Dartmouth, Garfield of Williams, John Hay of Brown University, Chief-Justice Waite of Yale. Mr. Waite, however, did not become an Ohioan until after his graduation. Grant, Sherman, Sheridan, Mitchell, McDowell, and Rosecrans went, of course, to West Point, Secretary Sherman gained his knowledge of the law in the office of his brother at Mansfield; and Giddings and Ben Wade, like many others, gained theirs in the office of Elisha Whittlesey. Hiram Powers graduated from the reading-room of the Cincinnati Hotel, and Howells from the office of the *Ashtabula Sentinel.* The Western Reserve College has graduated many good scholars and able men, who have taken high places in the bench, the bar, and the pulpit of their own State, but few who are better known to the country at large than Senator Conger of Michigan and some of the Ohio judges. "If our cherished mother," said Judge Williamson, in the speech from which we have already quoted, "like Sarah, has ever had the promise of children to be numbered as the stars in the heavens or the sands of the seashore, the promise has certainly not yet been fulfilled, and probably will not be until she reaches her Canaan in that promised spot opposite Wade Park."

The man who has now come forward to place the Western Reserve College in its new and higher position before the country, and lay in Cleveland the foundations of a really great university, is Amasa Stone, one of the millionaires of Cleveland, known to the extra-Ohio world henceforth chiefly through his connection with the Lake Shore

Railroad, of which he was for many years the managing director. Mr. Stone offered the college $500,000 on condition that the location should be changed from Hudson to Cleveland, and that Cleveland should provide a proper site for it. The citizens of Cleveland quickly performed their part, and upon the beautiful grounds at Lakeview, which we have described, the new buildings of the Western Reserve University will be dedicated at the opening of the academic year, in September next. These buildings will cost $150,000. The remainder of Mr. Stone's half-million will be joined to the quarter-million which the college now possesses, as a permanent fund. The college is thus placed on the most solid and generous financial basis; and anything which it may need in the future for the carrying out of larger plans it will not have to ask for twice, for among its trustees and enthusiastic friends are men as able and anxious as Mr. Stone himself to advance its interests. The removal of the college to Cleveland has, of course, excited some opposition, but only on the part of conservative and rather narrow men; and some conflicts have arisen over certain conditions of Mr. Stone's bequests, causing some heartburnings and boilings of the pot, which, though of some moment in their day to some of the good people of the Western Reserve, are of no interest to the people of Boston and the rest of the world. One point only: Mr. Stone demanded that the name of the college should be changed from Western Reserve to "Adelbert," wishing, and very properly, to build a lasting monument to a son who bore that name, a promising young man who was drowned several years ago while a student at Yale. This change the good men and true of the Western Reserve, also very properly, stoutly objected to; the Western Reserve was a name which meant altogether too much to be trifled with. An easy way was found out of the difficulty, however. The Western Reserve College is really a university, having been chartered originally with the power of conferring degrees in all departments, having at one time maintained a strong theological school at Hudson alongside its arts department, and having an important medical school already in operation in Cleveland. The new college thus takes the name of the Adelbert College of Western Reserve University. Perhaps some public-spirited friend of the higher education of women, as munificent as Mr. Stone, and following the worthy example of Mr. Sage at Cornell, will place an Alberta College in the hands of the University; and meantime those who are opposed, as the Oxford and Cambridge colleges were not, to names of simply personal significance, can console themselves by remembering that Adelbert means noble and bright, and that noble and bright men are precisely what we want every college to turn out, whether carrying *Adelbert* on its crest or not. Indeed, the "super-æsthetical" themselves could not well have hit upon a better name for a college than this.

Before speaking of the new buildings at Lakeview, we wish to say a few words about the building of them; for Mr. Stone is a good representative, in enterprise and force, of the men who are making the great West. He is a Massachusetts man, born at Charlton in 1818. His father was a farmer, and his college was the district school. When seventeen years old he entered into an engagement for three years to learn the trade of a builder. He was to have forty dollars the first year, fifty the second, and sixty the third, and furnish his own clothing. At the end of the second year he thought he could do better than that, and managed to release himself. His first work on his own account ended in a piece of bad luck. He took a note for $130 in part payment. In a few months the firm failed and the note became worthless. Mr. Stone still preserves this note as a memento. In 1839 he engaged with his brother-in-law, Mr. William Howe, in the erection of several churches and dwellings near Worcester. This Mr. Howe was the inventor of the famous Howe truss bridge. He secured his patent about this time, and built the superstructure of the bridge across the Connecticut at Springfield. Mr. Stone was engaged with him in this work, and continued in the work of bridge building for many years, introducing many improvements and displaying remarkable energy. He resided for many years at Springfield, and was for a time superintendent of the New Haven, Hartford and Springfield Railroad. In 1850 he removed to Cleveland, having previously contracted, in partnership with two other capitalists, to construct and equip the Cleveland and Columbus Railroad. This was the largest contract of this character that had been entered into by any one party or firm in the United States at that time. It was successfully executed in two years, and Mr. Stone became superintendent of the road. Then came the building of the Lake Shore road. The section from Cleveland to Erie was completed in 1852, and Mr. Stone became superintendent of this also. He has been director and president of roads innumerable since that time, and director and president of banks many and mills many. For several years he turned out more woolen goods than any other manufacturer in Ohio. He built the Union Passenger Depot at Cleveland. He was the first to design and erect a dome roof of a span sufficient to cover three lengths of a locomotive, and he has introduced many improvements in the construction of railroad cars and locomotives

He has been interested in his lifetime in the construction of more than ten miles of truss bridging. And, finally, he is the trustee of a Presbyterian Church, father of the modern system of pivot drawbridges, and father-in-law of John Hay.

The endowment of the Western Reserve University is not the first of Mr. Stone's princely benefactions. He has given to the Children's Aid Society of Cleveland property worth 50,000, providing the unfortunate children with a beautiful home; and he is the founder of the Home for Aged Women at Cleveland. But it is as the builder of Adelbert College that Mr. Stone will be chiefly remembered by the world outside Cleveland, and especially by all friends of the higher education.

The two buildings which are now being erected for the college are the college building proper, an imposing structure 150 x 100 feet, containing under one roof library, chapel, museum, laboratories, art rooms, society rooms, the university offices, and a dozen recitation rooms; and a brick dormitory 160 x 50 feet, with an annex, 60 x 50, containing the dining-hall, parlors, and rooms for the servants of the college. Both buildings comprise three stories, with high basement and attic. The architect of the college building is Mr. Joseph Ireland, a Cleveland man, who is also the designer of the magnificent new offices of the Lake Shore Railroad which have just been opened in Cleveland, and whose plans for the college were accepted in a contest into which architects from various parts of the country entered. The design is very simple, but convenient and admirable. The library is on the lower floor, directly opposite the main entrance; the chapel, which is of the same size as the library, is directly over this; and the natural history museum occupies the corresponding place on the upper floor. This upper floor has been arranged under the supervision of Professor Morley, the well-known professor of natural history and chemistry in the Western Reserve College, and contains, besides the museum and the professor's lecture-room, half a dozen laboratories and rooms for physical and chemical apparatus. An elevator, operated by hydraulic power, runs from the bottom to the top of the building. The material of the building is of the handsome Ohio buff sandstone, which is used in so many of the better buildings of Cleveland, trimmed with Euclid blue-stone and Twinburgh brown-stone; and the whole is surmounted by the lofty clock-tower.

The dormitory was designed by Mr. Stone himself, and is a fine structure, although some of its features might be criticised by one conversant with the conditions of college life. The perpetuation of the dormitory system in any shape in our new institutions is of questionable expediency; but if we must have it,—and it is not yet clear how it is to be superseded by anything better for the general class of our American college students, — then certainly three boys ought not to be put into one set of rooms, as is meditated here. Goëthe said very truly, in the "Tasso," that

> "A talent forms itself in stillness,"

although

> "A character in the stream of the world";

and it is with the development of talent that the work of the college is most directly concerned. We fancy that the talent of even the most studious will find pretty hard chances in a study shared by two others, if the boys of the Western Reserve are of the same species as the boys of our own university days; and we confess that our own character itself would be pretty sorely tried under such circumstances. The proverb that two are company and three a crowd, is nowhere so true as in the study, where, indeed, *two* are generally a crowd.

These two buildings are all with which the college will open its session at Cleveland this autumn. These will well meet its immediate requirements; but other buildings must rapidly be added, and first of all a gymnasium, for which no provision has yet been made. The present buildings have been designed with the most intelligent regard to future exigencies. Some friend of the university may safely be depended on to grace its grounds with a handsome chapel, relieving the present chapel for connection with the library below. The library of the Western Reserve College is at present its weakest feature, containing less than 12,000 volumes; and under the new system of education, whose saint is Gutenberg rather than Abelard, and in which the most useful office of the true teacher is the wise opening of books, no university can ask the people's suffrages which has not a library thoroughly furnished in every department. It certainly will not be long before the Western Reserve University will be enabled to point to a library as fine as the libraries of Brown and Princeton. In this there must be place for a Western Reserve alcove, a special niche for the books of sons of the Reserve alone; and the number of these which have been written, from the days of the journals of Seth Pease and Moses Cleveland to the days of "John Eax" and "A Modern Instance," is very great.

Cleveland already has, in the collection of the Kirkland Society, the nucleus for a really valuable museum of natural history. But the collection is by no means what it ought to be and might easily be made; and its accommodations are shabby and its usefulness limited. The society should join its forces to those of the college and transfer its collections to a creditable building at Lakeview. Similarly the city should coöperate with the college in the establishment of a worthy art museum. No university is adequately equipped, and certainly no city of the size and wealth of Cleveland has done its duty, which has not such a museum,—a museum where the student and the people can be introduced, by casts and a systematic sequence of saloons of photographs and engravings, to the treasures of Greek, Italian, and modern art; where a school of design should also have its headquarters, and courses of lectures in art, suited to the needs of the people, be delivered. And then the law school: already Cleveland rejoices in one of the finest law libraries in the country; and Judge Ranney and other Cleveland lawyers are taking steps toward the establishment of a school which shall so raise the standard of the profession as to forever make an end of the cheap pettifoggers who have disgraced the Ohio bar. All these institutions must sooner or later find a home at Lakeview; and with them a conservatory of music which, if not equal to the great palace at Cincinnati, shall at least be a worthy expression of Cleveland's musical culture and musical interest.

Indeed no university could commence its work in a better place at a better time and under better auspices than this. The university does not need Cleveland more than Cleveland needs it as the centre and crown of her organic intellectual life; and the city will deal with a generous hand. It has a board of able trustees, including such men as John Hay and President Hayes. Garfield was also one of the trustees. The preparatory schools from which the college has to draw are of the most thorough character. The preparatory school at Hudson, which has long been connected with the college, will be continued there and much improved. The public school system of Cleveland, under the superintendence of Mr. Rickoff, ranks with the systems of Boston and St. Louis; and among the private schools of the city is the well-known Brooks School, founded by the lamented Frederick Brooks, brother of Phillips Brooks, and brought to its present high efficiency by Professor White. The college will have the benefit of the close proximity of the Case School of Science, which, with an endowment of a million and a half, constituting it probably the richest scientific school in the country, and with an able corps of professors, will soon erect its buildings on grounds adjoining those of the college. We do not doubt that arrangements will be made by which the students of science in the college will enjoy the privileges of the lectures in the Case School, thus giving the college greater ability to strengthen its facilities in other departments.

To the great work which is before it, the university comes, most fortunate of all, unbound by the fetters of any sectarian theology. For no university has any longer a great future which hedges its chairs about by catechisms. Brick and mortar cannot make a university, but only brains; and brains in these days must have freedom. It is being found out, too, that freedom is best, and that it is not well to train boys for Waterloo at Kew Gardens. The atmosphere of Western Reserve University will be a religious atmosphere, for the sons have not forgotton the fathers, and know that religion is fundamental in character and education; but the university knows that the college is not the theological school, and it will not be by the Nicene creed that the teacher of Greek will have to square himself, but by Goodwin's Grammar. The theological traditions of the college are Presbyterian, but a sufficient offset to these will be the influence of the Wade Theological School, which, also unsectarian, will inherit Unitarian traditions. The general religious tone of the university will ultimately be the natural resultant of the reaction of the various institutions which center about it.

But the best inheritance of the university is the memory of the men who have made the Western Reserve and given it so proud a place in the history of the country. Surely those students are to be felicitated who do not need to go beyond their own neighborhood for the highest possible inspiration; who can hang upon the walls of their dining-hall the portraits of such generous givers as Stone and Case and Wade, and such truly successful men as Giddings and Garfield and Howells, and know them all as brothers.

THE INFLUENCE OF A FOREIGN EDUCATION ON AMERICAN GIRLS.

BY MRS. L. H. STONE.

There was a clause in the will of the late Governor Bagley of Michigan which comes to me as an appropriate text for this article, and which I hope will be but an introduction to a discussion far more important than anything I shall write concerning the influence of foreign education on American girls. In his last will Governor Bagley says: "I commit the education of my children to my beloved wife, in whom I have entire confidence, making, however, this one requirement,—that my children, one and all, be educated in in this country, as it is my sincere desire that they may grow up to be true Americans, and lovers of their native land and her institutions."

When I read this clause in Governor Bagley's will and recognized in it sentiments that I knew to be a part of the man himself,—an expression of what he believed and felt, of what lay nearest his heart,—I was deeply touched by the request. It was like a good word, a tender sentiment expressed by the dying for one of my dearest friends; and though it would be impossible for me to trace the thread of the association, I found myself instantly carried back to the first lesson that, in my earliest childhood, I was set to learn in the New-England Catechism. It is so long since I have seen a copy of the little manual in its coarse, brown-paper covers, and with leaves dog-eared from much use, that I may find myself unable to quote quite correctly the words of the good lesson to which I refer. But to the question, why Adam and Eve were placed in the Garden of Eden, I well remember the short and easy answer on which I felt sure of myself for the Saturday morning school-drill, preparatory to the next day's Sunday-school: "To dress and to keep it," was the answer. There was no allegory or myth about the Garden of Eden, in those days; nor about our first parents being put in charge of a garden on their native soil; and though the "dressing and keeping" was a figure of speech that rather slowly unfolded its meaning to me, I think I never quite lost the impression of that catechism lesson: viz., that there were some peculiar responsibilities which birth and native soil imposed upon one, and which it cannot be quite right to throw off, It was a lesson that grew of itself out of the seed of the words, but lasting and as good as any I ever gathered from the pages of the Catechism, whose words in their meaning, when I learned to recite them, were mostly Greek to me.

Scott is an old-fashioned poet now. He has been so long superseded,—I cannot say surpassed,—by many more recent authors that I can hardly expect to find many now of an age to quite sympathize with me in my old-fashioned admiration of a stanza with which he introduces the "Lay of the Last Minstrel." But these few lines were among the first pieces of poetry I ever voluntarily set myself to commit to memory. It was perhaps the smooth measure of the iambics, through which I caught a vague idea of the meaning of the words, that first charmed me; but I remain so old-fashioned that even now the sound and sense of those words are as beautiful to me as when I recollect repeating them, sitting on the door-step and gazing in wonder at the sky bounded by a horizon that bounded the world to me, beyond which I dreamed of nothing farther :

"Breathes there a man with soul so dead
Who never to himself hath said,
This is my own, my native land
Whose heart hath ne'er within him burned;
As home he hath his footsteps turned
From wandering on a foreign strand?"

I have often met Americans abroad who were proud to have outgrown the narrow patriotism expressed in such verse, the sentiment and sound of what they called "school-boy declamation poetry." They had, by varied travel and long residence in foreign lands, by association with different peoples and races, quite lost the feeling of home, they said, as associated with one country more than another; they read with no more eagerness a New York than a London paper; the reports of our Congress had no more interest to them than those of the English, Italian, or any other European parliament. They had attained to a cosmopolitan culture that regarded as puerile sentimentality any special attachment to the land where one chanced to have been born. Such sentiment I have not unfrequently heard expressed by Americans abroad. In truth, they had lost their own country without finding another. But I have never attained to such culture. My heart never responded to such language; I am an American wherever I am. Her soil is mine to dress with my quota of labor, and keep with my mite of influence, as truly as was Eden, in the Catechism, the charge of Adam and Eve.

I have often seen a smile of derision kindled on the face of an American cosmopolitan abroad, when some other simple American, who had not learned that it was not cultured to love his country, by chance expressed in the unmistakable dialect of that country a love for and a faith in her institutions. But my tears are sometimes unsealed, and my heart leaps forth in tender response, as an untrained school-boy even intones our beloved poet's rapturous song:

"Thou too sail on, O Ship of State,
Sail on, O Union, strong and great!
Humanity, with all its fears,
With all its hopes of future years,
Is hanging breathless on thy fate;
Sail on, nor fear to breast the sea!
Our hearts, our hopes are all with thee;
Our hearts, our hopes, our prayers, our tears,
Our faith triumphant o'er our fears,
Are all with thee, are all with thee."

As I read the history of the times and discern the progress of ideas, the hopes of humanity are enwrapped in the institutions of our country more than in any other country in the world. Therefore we need to give our thoughts more to the development of our own institutions, and the adaptation of education to them, rather than to copying or adopting other systems. All education, national as well as personal, must be an evolution, not an accretion.

I have often been questioned as to my judgment, formed from what I have seen of European schools and the kind of education there given to girls, of the effects of the practice so common among us, of American parents virtually breaking up the home in this country, and the mother resorting to Europe,—for the father is seldom along, except as a migratory bird flitting between the two hemispheres,—as a resident during the period of their children's education, for the sake of the superior advantages, as it is claimed, there afforded above the best schools of this country. As to European schools,—by this I do not mean Universities,—generally, they have not seemed to me comparable to ours, nor as well adapted to American girls as those which have been the legitimate outgrowth of our institutions, and the customs and ideas of American society. Such, too, has been the opinion of the most thoughtful American women, the wives of some of our government officials residing in Europe, with whom I have conversed on the subject; and the same opinion has been expressed by several mature young women who have themselves spent some years in Europe engaged in special studies.

Of the excellence of the German schools, so much is said in all journals, that it is unnecessary to dwell upon the point. There is no doubt that teaching is studied as a science and a philosophy more thoroughly in Germany than in any other country in the world. No teacher can get a situation anywhere in the government or in the private schools of Germany who has not studied pedagogy or the science of teaching, as well as made a specialty of the particular branches he or she is to teach. In this respect we have much to learn of the Germans, and in their methods of teaching also; but I should deem it for better that our teachers and educators themselves go to Germany to study methods there practiced, and to gather hints and suggestions for the improvement of our schools, than that our youth, of either sex, be exposed, during the most impressible years of their lives, to all the influences of institutions quite foreign to the genius of our own, for the sake of greater advantages in the study of a few branches.

The teaching in the government schools of Germany, those corresponding most nearly to our public schools, has seemed to me very thorough, but its range is narrow, and after pupils are ten or twelve years old it consists almost entirely of lectures, of which the pupils take notes and on which they are examined. This requires much writing, in which children in the German schools generally greatly excel ours. They are examined very strictly as to penmanship, punctuation, forms of expression, etc. They are obliged to keep their notebooks very neatly, and to express themselves accurately and clearly. Geography is admirably taught. But in our best schools we are fast adopting German methods of teaching. In some of the Boston schools, and in Quincy, I have seen the same modes of teaching geography and the same kind of training in order to cultivate readiness, ease, and accuracy of expression in writing.

The whole discipline of German schools is very strict. Children in our schools would, not submit to it nor parents yield to the control of teachers, as the German parents do. The school-rooms, for comfort, neatness, light, and ventilation, do not compare with ours. In schools that I have visited in England, Scotland, and some in the Isle of Man, where it is claimed that a system corresponding to our public schools was earlier established than in England or Scotland, the discipline, as I have observed it, was simply brutal, and would not be tolerated by any school-board in our country.

But in considering the influence of foreign education upon American girls it is not necessary to notice these schools, only as their character and discipline is somewhat that of all foreign schools, as these are not the schools patronized by American parents who go to Europe to educate their children. Such parents place their children in private schools or employ for them private teachers, for the various European languages which they are ambitious that their children should speak with facility. And this is an accomplishment which, it must be acknowledged, can be much better acquired abroad where one hears constantly spoken the languages pursued, than at home. The only question is, if our children will gain more in one subject than they will lose in many others. Studies thus pursued are subject to many interruptions; for, that the mother and some friends who generally accompany her may enjoy themselves and get something out of their sojourn in Europe, they flit from London to Paris, from Paris to Geneva, Dresden, Florence, Vienna, Rome, etc., availing themselves of such advantages for their children as offer, or such as are recommended by persons whom they chance to meet in Pensions, which arrangements are again broken up in a few weeks or months at most.

Among the best German schools of which I personally know anything are those of Weimar. In one of those, the Sophien Stift, a school endorsed by Goëthe's friend, the Grand Duchess Sophia, I placed a young friend some years since. In answer to inquiries that I recently made of her in regard to the teaching and training of pupils in that school, she writes, — that much attention is paid to the study of the languages, for which native teachers are always employed, and for the dead languages a Stift professor. Otherwise the studies, she says, are much the same as are pursued in our schools. Geography and history are taught by methods superior to ours. But the methods, as I have observed the teaching, are quite similar to those in the Quincy schools, Massachusetts, and in many of the schools in Boston. The course in mathematics compared with ours is very limited, and the instruction in all the branches taught, except the languages and music, is more rudimentary, more adapted to children or very young persons than it is in our schools. There, as in the government schools, the instruction is given almost entirely by lectures. Of these lectures notes are taken by the pupils. Sometimes the lecture is scarcely more than a dictation exercise; some times the more advanced pupils are permitted to make their notes after the class-hour is over, and to pursue the subject farther, by consulting books referred to by the professor, if such books are accessible to them, which is not, I think, so frequently the case as in our schools. These notes must be most carefully and neatly made. They are first submitted to the governess, then to the professor who has given the lecture. There are, doubtless, advantages in so much writing; and as the young lady who was for some time at school in Weimar says, German girls and women express themselves with greater ease and elegance in common conversation than do American girls and women.

My young friend further speaks of a custom in the schools in Weimar of taking all the pupils once a week, under different teachers, on an excursion of out-door study and observation. Sometimes they went to the manufactories, sometimes to a neighboring town where there was something to see or study, manufactories of some kind, perhaps,—something by which the pupils study the thing itself rather than study about it in books. These are advantages over ours which European schools at present enjoy. Such methods of teaching also require superior knowledge and skill in illustration in the teacher. Teachers there universally draw with great readiness. But these methods of teaching are being rapidly adopted in all our best schools.

There is a fine opera in Weimar, to which the pupils are accustomed to go with their teachers very often. Operas being given in the afternoon or early in the evening, there is no dissipation of late hours; and such operas are a part of the musical education in the schools of Weimar, and designed to be so. The opera is the subject of discussion and criticism; the fine passages are pointed out, the story made familiar to the pupils, fine strokes of execution are commented upon and made natural themes of table conversation; so that music is made to mean more to German school-girls than it is to the same class of music-pupils here.

But in these schools, excellent as they are in many respects, there are many customs not adapted to American life; and the best use, as it seems to me, that Americans can make of them is, for mature, thoughtful teachers to study them; and incorporate such excellencies as they possess, superior to ours, with our system of teaching, assimilating rather than borrowing, and adapting them to our institutions and our uses; doing, in short, as our American poet-artist, W. W. Story, in his poem entitled "A Contemporary Criticism on Raffaelle," represents Raffaelle as doing, and vindicating himself to his patron, who has charged him with want of originality, for so doing. "True," he says,—

> "I took Lippine's figure for St. Paul,—
> What then? I made it, in the taking, mine,
> And gave it new life in a new design.
> I worked in Pemquino's style, but all
> My own my pictures were in any line.
> By sympathy of feeling and of thought,
> Not coldly copying in his forms I wrought.
> The theme of the entombment, I admit,
> Was from an old sarcophagus of stone;
> But to another purpose using it,
> Its new expression made it all my own.
> From all great men and minds I freely learn,
> Thank them for help and taking what I find,
> Stamp on their forms the pressure of my mind."

This is just what, in the formative state of our educational institutions, we need to do. We need to Americanize, not copy servilely, all the good we can get from European institutions. An experienced teacher, a student of the science of teaching, will find great instruction in the study of German schools; but for young American girls I would greatly prefer a course of study at home in our best schools. The necessities of American life have developed in American women as well as men a fertility and versatility of invention for whatever purposes we wish to accomplish, which may be called an Americanism. In this richness and readiness of expedients, they seem to me superior to foreign women. We do not want to put our young girls into a mould that will warp them from all traits developed by all our institutions, but rather to modify, and train, and cultivate those traits to their highest and best in a home system which has appropriated and assimilated what is best in foreign systems.

These suggestions, intended to apply to young girls, and the habit so common among American women of going to Europe to reside during many years for the education of their children, until a vast number of Americans virtually live abroad, and yet without making that country home, as foreigners who come to this country make America their own, — are not applicable to all persons who go to Europe to study. There is a class of women in our country, students who resort to the higher educational institutions of Europe,— scientific, medical, and art schools, who gain for themselves true riches, and by so doing may bring back what as much enriches us as themselves in their respective departments of study. I do not think our institutions can at present give such students what they seek and find abroad. Our best schools for women are, compared with helps that such students need, only preparatory schools. There are women students that need what our best scholars, scientists, professors in our collegs, our artists need. They should be allowed to seek instruction wherever they can find it. Sending our best abroad for the higher culture, we shall find our loan returned with a scripture measure of interest. We are finding it in various departments of teaching in our schools: in art, which has recently such a wonderful impetus; in the profession of medicine, which many American women are now so honorably and usefully filling; into our hospitals, into which a new order of apostles has been sent, endowed with the gifts of healing, in which a new class of madonnas has been enshrined, — not like those of the old order, "enthroned in imperial state," but such as are no less daily working miracles by the new, and better, and kindlier, and more merciful order of things which they inaugurate wherever they go. God speed such women toward any foreign school of science or art, or any institution of any kind, where, untrammeled by home cares or duties, they may, under the best teaching that the world affords, prepare themselves for the highest places of responsibility in our own country. Such places will assuredly be open to women when they are fully, thoroughly prepared to fill them.

I have known the children of families who have spent some years in Europe in this way; they have generally been able to speak French and German, perhaps Italian, very well, but in general intelligence, love of reading; they seemed to me less advanced than children of their age at home, and in some instances they soon forgot the languages they had learned abroad. They had not advanced so far as to have acquired a taste for the literature of the language thus studied, and having so seldom an occasion, when they come home, to speak the foreign languages, their acquisitions in them proved but ephemeral accomplishments. This need not have been so. If their mothers had improved the opportunities available to them also, while their children were studying, they would have become so interested in the literature opened to them that, after coming home, they might have led their daughters on, and, at home, have reaped the true harvest of their rudimentary studies. But the mothers were absorbed in pleasure mostly, or they had yielded to a most besetting temptation to let time slip, let the days pass on without accomplishing anything. This is a peculiarly dangerous temptation to persons who have a long stay in Europe before them. Nice, Baden, and other similar resorts have been to me the saddest of places; for it is very sad to one who feels that "life is real, life is earnest," to see the responsibilities of duty and all the serious pursuits of life thrown aside for mere pleasure. It is true one sometimes meets people whom it is delightful and profitable to know; but to say the best we can of American life in Europe, much dissipation, and something little better than gossip, pertains to that which thousands of Americans lead there. There are noble exceptions to this. I have known mothers who had studied the matter of the education of their children most seriously, and who had high aims for usefulness for them, as well as true culture. They wanted to utilize the years between seven and fourteen, perhaps, in the study of the languages where their children would acquire them by the natural method, learning them as they had learned their own, by speaking and hearing them spoken. They thought children in our schools were, during these years, set to study branches beyond their capacities,—which is too much the case,—and, to carry out their own plans, they must educate them at home under private teachers or go abroad. They chose the latter course, and I have known such mothers who devoted themselves as carefully to the education of their children abroad as do good mothers at home.

The great danger in this is, lest children in the future associate ideas, customs, modes of living foreign to those of the land in which they are probably to live, with the happiest years of their lives. The childhood's home, that ought to be a kind of Eden in the background of every life, will be wanting in the lives of children who have passed their childhood in a foreign land. Mrs. Marsh, the wife of our Minister to Italy, spoke of it as an immense loss in the lives of people destined to live in America, not to be able to associate remembrances of the happy home of childhood with their own country and all its interests. Conversing with her once upon the subject, she spoke with deep regret of the growing tendency of American mothers to break up their family home in America and come abroad for several years, for the purpose, as they claimed, of educating their children in European schools or under European teachers. She said she was convinced that there were no schools in the world so good as American schools. To be sure there were superior advantages for the study of art and the languages, but none that would, in her opinion, compensate for the false notions she had been most deeply pained to see young American girls acquire by a residence of a few years abroad. She had heard foolish young girls lament that we could not have a court and the splendid ceremonies attending it in America. Indeed, there was nothing grand, as they esteemed it, in America. There were multitudes who came to Europe with their parents, who fritted away years without making any serious gains in education. I spoke of the greater advantages for acquiring a knowledge of the modern languages. They were superior, she said she would allow, but the greatest advantage of our acquaintance with the French, German, and Italian languages was, that it opened the literature of those languages to the student, and so excellent were the facilities now for the acquirement of a knowlege, certainly of French and German, in our own best schools, even in our free high schools, that one did not need to come abroad for the study of the languages even. But I still argued that it seemed to me impossible to get the true culture of an acquaintance with a language without hearing it spoken. She would allow this; still, she said, had people seen the loss frequently sustained for such gain, as she had seen it, they would think with her that the compensation would but miserably compare with the sacrifice they had made for the gain. She wanted Americans to feel what were the inestimable possibilities of their country, and the obligation every American, man or woman, was under to their own land. To be sure many things were in a crude state in America; the art of Europe was most enjoyable, the sunny climate of Italy and other parts of the south of Europe, the freedom from the claims of society, release from obligations to institutions of charity, etc.; in short, the life of ease and pleasure, and that only, which people residing long in Europe, fell into, was very tempting. But after all it was not the largest life to live; while many saw this attractive side they failed to see the side on which they lost immensely. And as to the study of the languages, she thought if people first made use of the opportunities their own land afforded, the rest could be gained by short periods of travel, not long enough to become forgetful or careless as to how things were going on at home, in the government, religion, or general interests, in any respect, of their own country. She agreed perfectly with Hawthorne, that if one wanted to return to America with that interest in American institutions which becomes a useful citizen, one should not stay long abroad.

Travel in Europe is almost a necessity to an intelligent understanding of our literature, so freighted as it is and must be with allusions to the cathedrals, churches, and general art, and all the old institutions of Europe, but instruction is best gained by travel when one has a direct object in view and some distinct idea beforehand of what one goes to find.

EMANCIPATION OF TEACHERS IN SWITZERLAND.

BY W. N. HAILMANN.

It will be of interest to the readers of EDUCATION to learn of successful efforts in our sister republic to secure teachers that amount of self-government which is due to so important a profession, playing an essential part in the evolution of humanity. The facts speak for themselves, and need no comment. They are gathered from an interesting paper on "School-life in Switzerland," published by H. Morf in the *Paedagogium*. He has chosen for his purpose the school-laws of the Canton of Zürich, which were put in force *by the people* of the canton in 1868.

The Canton of Zürich has 317,000 inhabitants. The sovereign power of the state rests in the people, All citizens are equal before the law, and enjoy equal civil rights. The people exercise their sovereignty directly at the polls, or indirectly by the authorities and officers elected for certain purposes. Judicial tribunals are elected for six years; all other boards and officers for three years. The legislative council is called the *Cantonal Council.* It contains one representative for every 1200 inhabitants. It meets four or five times a year for periods of three or four days, according to the necessities of business. The highest administrative power is vested in the *Administrative Council*, consisting of seven members, elected by the canton at large. The members of the Supreme Court are elected by the Cantonal Council; the members of the eleven Circuit Courts are elected directly by the people. The communes are, within the limits of the laws, perfectly autonomous and independent in the administration of their affairs and election of their local officers. All laws proposed and agreed upon by the Cantonal Council must be submitted to the people for ratification. Every citizen may initiate the establishment of a new law, as well as the modification or repeal of an old law, if he is supported in his proposal by one-third of the Cantonal Council, or by five thousand citizens. In such cases the proposed change must be submitted by the people.

The supreme control of the schools is vested in the *Administrative Council.* The member of this body to whom the special care of the department is delegated is the *Educational Director.* He is assisted by an *Educational Council* of six members, four of whom are selected by the Cantonal Council, and two *by the teachers of the canton.* Of these, one must be selected from the teachers of the higher institutions of learning, and one from the teachers of the common schools (volksschulen). The cantonal school-board exercises supervision over all educational institutions, and carries out all existing laws, ordinances, and regulations. For this purpose it places itself in the necessary connection with the subordinate boards and officers.

Among these are, in the first place, the circuit school-boards, of which there are eleven in the canton, with nine to twenty members, according to the number of schools in the circuit. *Three of the members of each circuit board are elected by the teachers of the circuit*, the remainder by the voters of the circuit. These exercise supervision over the schools of the circuit, conduct the examinations at the close of the school-year, and furnish reports of the schools and teachers to the Educational Council, and to the communal boards of education. Each school-district elects its own communal school-board; the only limitation in regard to membership is that there must be at least five members. The teachers take part in their deliberations, but have no vote; they may, however, be elected to full membership by the commune. If a district has a very great number of teachers (as, *e. g.*, Zürich and Winterthur), the teachers are represented by delegates in the district boards. In this case the teachers meet in convention for the discussion of various questions pertaining to the schools, and of propositions to be made to their school-board. They elect from their number a presiding officer, who also represents them in the board. All these teachers have the same rights, duties, and salaries; for his work as representative of the teachers in the communal board, the presiding officer receives a small additional compensation.

The *communal board* has the inspection of schools of the commune, and carries out the regulations of the school-law and the ordinances of the superior boards. It takes the necessary *introductory* steps for filling vacancies (the people *elect* the teachers), and superintends the reception, attendance, and dismissals of pupils. It watches over faithfulness in the discharge of duties on the part of the teachers. In case of incompetence or other disability and of gross neglect of duty, it presents changes or makes necessary announcements to the circuit board for further disposal. On the other hand, it has to assist the teacher in all proper effort, and to see to it that he is regularly and fully paid. Its members visit the schools of their commune, in suitable rotation, in order to observe the instruction and to examine the registers. In the presence of the pupils, no inspector is permitted to reprove the teacher, or to warn him.

The communal school-boards furnish annually statistical reports concerning the status of the schools intrusted to them, containing any recommendations they may deem proper to make. Every three years they furnish a comprehensive report of the status of their schools, apparatus, buildings, etc. In addition to this, the educational director calls, every year, delegates of the eleven district-boards to a conference with the Educational Council, when educational questions of general interest are discussed; the director, or principal of the Cantonal Normal School, is a member or these conferences.

A further factor in the school organism of Zürich is the *school-synod.* It consists of all the teachers of the canton, from the meanest village school-master to the rector of the university. The members of the school-boards are entitled to participate in the deliberations, but not to vote. The Educational Council is represented by two members in the synod. It holds ordinarily one meeting every year; but extraordinary meetings may be called by the Educational Council in obedience to its own resolutions, or upon the request of the teachers of four of the circuits. The synod determines upon the places of meeting. Every synod is preceded by a preliminary meeting, consisting of the officers of the synod (elected for two years), by one representative from each of the eleven circuits; from the higher schools of Zürich and Winterthur, and from the Cantonal School and University. In these preliminary meetings the delegates of the Educational Council participate as advisory, but not voting, members. Its business is the arrangement of the program and the preparation of the circular of invitation. The synod elects two members of the Educational Council; it receives the annual report which the Educational Council makes to the Administrative Council upon the status of the schools of Zürich, and the general report upon the activity of the teachers in the circuit chapters. It deliberates upon means for advancing the schools, formulates wishes and proposals to be made known to superior boards, listens to addresses on professional questions, etc. The deliberations of the synod are public. The minutes are printed at the public expense for the members of the synod and of all school-boards.

The teachers of both sexes living in a circuit form the *school chapter* of the circuit. Attendance upon this is obligatory. The chapters hold sessions four times a year; extraordinary meetings may be called. They elect their own officers, and also three members of the circuit school-board. Again, they are expected to furnish the Educational Council their opinions concerning the curriculum of the schools, the introduction of new school appliances or modifications of those already in use, as well as concerning the laws and regulations which may be proposed. If this has been done, each chapter designates a delegate for a conference, which formulates the general opinion of all the chapters. This conference, too, is attended by a delegate of the Educational Council with advisory powers but not entitled to a vote. Furthermore, the chapters engage in discussions, in experimental lessons, and other exercises calculated to benefit its members. The officers of each chapter report annually to the Educational Council, and these reports are condensed into a short general report by the officers of the school-synod. Annually, before the end of March, the president of the synod and the presidents of the chapters hold a conference for the discussion of school affairs. The minutes of these conferences are sent to the Educational Council, which takes due notice thereof. Each chapter has a library, and receives annually a contribution of sixty francs from the state for its extension.

Concerning the salaries of teachers, it is to be observed that there is a periodical increase for successful experience; that in the same commune the salaries are the same for all primary teachers (of the same grade of experience); whether they teach higher or lower classes, all enjoy the same rights and duties, the same rank and esteem; that female teachers receive the same salaries as male teachers; and that if a commune chooses to pay more than the minimum salary to its teachers, the state shares the burden of the increase without stint. All teachers of the common schools are subjected every six years to a reëlection, or rather to a confirmatory election by the people of the commune. At the last election, out of 624 teachers only sixteen were not reëlected by their communes; and of these, three were reëlected at a second election. Teachers who after thirty years of service are incapacitated by old age or disease, are pensioned with an annual income of at least one-half their last salary; but the Educational Council may increase this pension for certain specified reasons. Similarly the communes may increase this sum from their own means.

It may be well to add that the modifications in the laws from which the above is culled, and which have been in operation for fourteen years, have during this period been few and unessential, corroborating their tendency and original meaning. The teachers have grown in self respect, and proportionally in the respect of the people; and the latter appreciate more the great value of educatian, and are therefore always eager to furnish the means for their further improvement. In some communes, indeed, the salaries of teachers are more than double the minimum required by the state.

Undoubtedly the details of the Zürich plan are not, in all their features, practicable in our communities; but the spirit of this unique school organization is something to be devoutly wished for and persistently worked for by far-seeing friends of educational progress. The emancipation of teachers from a state of absolute and defenceless dependence on unprofessional men is the indispensable first step to reliable, permanent, living reform.

THE SYSTEM VERSUS THE TEACHER.

BY PROF. J. H. HOOSE.

Public functionaries of state, the pulpit, supervising school officers, boards of education, and teachers utter in consonance one chant, — "As is the teacher so is the school" ; which is but another way of saying that the teacher inherently constitutes the school. This old sentiment has been handed down by tradition from father to the son and daughter of his neighbor from those days whereof the memory of man runneth not. It is time to inquire how much of the sentiment that is embodied in the sentence cited belongs to the legendary ages, and how much of it is true in theory and practice. Legends are traditions which date their origin from a society that was chaotic in relation to the forms of social procedures; they belong to times when men were the pulpit; when men were representatives of theories; when men were the rostrum; when men were the center, life, and substance of forms and principles; they belong to those ages when societies were conceived as being constituted of an aggregation of people rather than as being composed of organized institutions. In those distant days the man was the institution; he was the school, so far as the term school can be applied to the condition of things as they existed at that time; indeed, nothing was possible then, except to conceive that the man was the school, for he constituted in his own person the system of schools, the theory of procedure, the courses of study, the authority to govern, and the power to dictate terms of admission. When the master was absent the entire school-system ceased to exist; his breath was its life; his departure was the annihilation of the school and the system; when he reopened a term, the system began *de integro*. Ancient governments proceeded on the theory of aggregation of massses of people held together by the power of one ruler. Roman civilization introduced the theory of organization into governmental affairs. In the first instance the government died with the sovereign, a new one being instituted by the ascendency of a new monarch; in the second instance, the individual emperor constituted but one element in the administration of the affairs of government. The theories of organization constitute the bases of modern institutions. At the present time, government means a series of powers and forces and a collection of conventional forms of procedure which are arranged into order in such manner as to afford a definite place for each member of the society. In other terms, government means an organization of the forces and forms of society. A government so constituted is a system. The system determines with authority the status of its members; *e. g.*, that the colored people who were once slaves in the United States and in Great Britain are not in bondage now, is a fact of government. Owing to changes in the system of government, the people of Japan enjoy greater privileges and attain a higher degree of enlightenment to-day than in times past; the comity of nations is more humane than formerly; countries are pillaged less and the helpless are unmolested in modern warfare; men now resort to mob-law less than in former years to deal out just punishment to offenders; and the freedom of the press has been enlarged.

Some systems of government lodge the controlling forces with an autocrat, or with the autocratic few; other systems distribute the powers among the many. Some sytems give influence and position permanently to their members; others permit only limited periods of possession to positions and powers. If European courts have diplomatists who are better qualified by learning, accomplishments, and experience to be their representatives in foreign countries than have the United States, it arises from their systems of government. Americans boast of the institutions of their native land; they recount with pride the progress which is evident everywhere within the borders of the United States; they tell emigrants what liberties of possessing property, what civil and political powers of citizenship, what possibilities of promotion, can be obtained in this "land of the free and the home of the brave." This is due to the fact that the systems of government of the United States and of the several States afford all these privileges and possibilities to the people. Were there no differences in systems of government, the United States would be no more desirable as a country for emigrants that China or Ceylon; one country would be as good as another to live in, except in the matter of geographical situation.

The status of a profession in any country is determined by the system of government; the status of an individual of the profession is fixed by the system into which the profession is formed under the government. Even if it is true that individuals have arisen who were stronger than systems and have overthrown them, other systems have been established in their stead; and it is still true generally that system molds the man, inasmuch as it gives express or implied definition to his status therein.

In the light of the foregoing examinations, consider the status of the profession of teaching in the United States. The generic idea in the system of schools is the Board of Management. State Boards are appointed by direct executive power, or are elected by the Legislature, or are designated by the governor and confirmed by the Senate. When a chief executive of a school-system consists of a single individual, he is appointed by a State Board, or is elected by the people or the Legislature, or by the combined action of the Legislature and the Governor. Local Boards of Management are quite generally elected by the people. State laws prescribe the status of the officers to whom are intrusted the administration of educational affairs. The local Board employs a teacher to enter a school for a year, for a term, or a week, or during the pleasure of the Board. The teacher begins duty already half dismissed, for he who has no tenure in his position is an alien in his school and the community. The Board is actuated naturally by any sentiment which is strong or uppermost in the community, whether it be the idea of educational abilities, or that of expense, or that of sectarian bigotry, or that of power and emoluments which belong to the system of favoritism. All these possibilities inhere in the system of schools and are the forms authorized by the government. The Board is composed of a number of persons, and a majority give it an authoritative voice. Hence the system provides protection to the rights and interests of a teacher against a factious minority of a Board. But suppose that the Board does injustice to a teacher,—what means of appeal and fair protection does the system provide? Let those answer who investigate the system of schools in the several States. What is the status of the teacher under the system? The theory of *in loco parentis* places him under amenability to the public; although he is hired by a Board, yet he is not its agent solely; he is much worse off than a commercial agent who is responsible only to his principals; or than a lawyer who is accountable only to his client; or than a physician who is employed by a family. The system provides no professional life and surroundings for a teacher; his qualifications may be passed upon by persons who have but slight, if any, acquaintance with the profession of teaching. Law-makers and supervising officers are industriously restricting the conditions of a certificate of qualifications; a certificate may be annulled often by authorities acting upon mere nominal cause under the inspiration of whim, or favoritism, or partisanship. These circumstances curtail the liberties and privileges of a teacher and thwart his ambitions and purposes. Turn now to the teacher at work under a local system of schools, as in a city. He must do this and refrain from doing that, because such are the regulations of the Board of Management; he must keep these records and make those reports, because they are demanded by the regulations of the Superintendent; he would like to introduce changes in his school but cannot because the system will not allow them.

Summing up the foregoing, what are the limits within which a teacher must perform his round of duties? He is limited by the laws and customs which constitute the general school-system of the State; under this system he is subject to the caprice of partisan politics, of prejudiced bigotry, of undying selfishness, and of the rule of demagogues; he is amenable to parents and Boards of Management. In addition, he must be gentle and offend none; he must be an ensample to be read of all men.

How can these evils which surround the teacher be removed? It is idle to arraign the trustees in educational meetings where they are not present; educational journals do not reach the mass of homes. Teachers are impressed that they must teach patriotism, and they refrain from investigating publicly the chief cause of all the evil effects above-mentioned. Why do not teachers have the courage to avail themselves of the press of the country to lay bare the defects of the system of schools, as do the other professions the faults of their own systems? Why do they not dare to discuss publicly the matters which lie in the hands of those who make the laws? Are not teachers made servile by the very systems in which they labor? As the waters run to the Atlantic because they fall from the clouds upon the eastern slope of the continent, so do partisan considerations in supervising authorities, servile teachers, poor teachers, and poor schools exist because they come into being in the currents whose sources inhere in the system. Read many of the educational journals published in the States where the possibility of favoritism is centered in an authority from whose will the system of schools affords no appeal, and what is found? The pages too often contain animadversion upon trustee and teacher, and flattery for the supreme authority. A review of legislation and practice in regard to teachers will show that two ideas have pushed to the front with more and more prominence: (1) the idea of securing a maximum of qualifications for a minimum of salary; and (2) provisions of law by which teachers can be driven from their posts at any moment, with no safeguards in law to protect their tenure of office. The extraordinary measures which are taken by law-makers and supervising authorities to abridge the rights of teachers would seem to indicate a fear lest teachers should enjoy the full measure of privileges which are allotted to the other professions. The question of how to remove the evils will be answered by citing what is done in other departments of government when greater efficiency is to be secured or wrongs are to be righted. Those who are interested set to work to modify the systems by applying to law-makers. For instance: when the courts are to be improved, the systems of appointment and of tenure of office of the judges are modified; when the codes of law become cumbersome and inefficient, new codes take the place of the old ones. The following, taken from a recent daily, is pertinent at this point, because it shows the possible power of system over courts of justice, although in this instance the action was accidental:

> "Pennsylvania is setting an excellent example to the whole country this year, in ignoring in many places party claims in the selection of candidates for high offices which are to be filled in the ranks of her judiciary. In Philadelphia, for instance, Judge Ludlow, who is a Democrat, has received the support of the Republicans, while Judge Mitchell, who is a Republican, has been endorsed by the Democracy. Similar political phenomena are occurring all over the same State. Partisanship should have no place on the Bench, from the lowest to the highest court in the land. Justice should not be weighed out on the scales of party. The contrary theory, even in the federal courts, has unfortunately prevailed almost from the foundation of the Government. Even Mr. Jefferson complained that the United States courts in his day were packed not only with federal officials, but with federal judges, so that it was almost impossible to obtain justice for the Republicans of that day. Mr. Jefferson, however, bettered the example that had been set him, and our later Presidents have not failed to follow the precedents of the founder of Democracy. Almost the only efforts to free the Bench from partisanship have been made by the people, not the executives, State or federal. The example of Pennsylvania is one that should be generally followed."

It is the system of schools which gives possibilities of good and evil in educational affairs. The school is no more as is the teacher, than is the government in China as the individual citizen; the citizen is what he is because of the system of government. The chant which introduces this article should read thus: As is the school-system so is the school and the teacher.

IS THE PRIZE-SYSTEM, ON THE WHOLE, THE BEST FOR COLLEGES?

BY J. H. CARLISLE, LL.D.

In this question prizes are considered as distinguished from rewards. All the degrees given by colleges, for example, are rewards. They may be given, in many cases, too easily, but no one has proposed as a remedy for this, that they be given as prizes to the few who stand the best examination. It is one thing to reward all who do well. It is quite another thing to give prizes to the few who are pronounced the best. You may offer a reward to all who are punctual, but do not offer a prize to the one who reaches the chapel first in the morning. Give a reward, if you will, to every engineer who uniformly makes good time, but do not offer a prize to the fastest runner on the road.

Before taking up directly the question before us, something may be said about the numerical method of estimating recitations, as it is so closely connected with the prize-system. It was once supposed that, if we carried mathematical phrases and symbols into moral questions, absolute certainty could be had in all our reasoning. That was soon found to be a mistake. It seems strange, however, that we have carried mathematical numbers into our methods of estimating intellectual work, as the exact proof of intellectual effort. Cases have occurred in which the possession of an honor turned on the third decimal figure, in the summing up of hundreds of numerical estimates. At a late commencement it was stated, in a published notice, that after a close examination it was impossible to decide between two competitors, but after a second examination, A. B. "won by a hair's-breadth." What is this that you are measuring so minutely? Is it the length of a man, which you can measure with close approximation to the fraction of an inch? Or is it the weight of a man, which, with the help of Fairbanks's splendid scale, you can tell to the fraction of an ounce, or even of a pennyweight? No; it is intellect. It is scholarship. It is merit. Is this comedy or tragedy? It is not given to any finite mind to measure men thus. There is an appearance, an affectation, let us say without offence, of accuracy here that may be deceptive. The word *examination* literally means to try with scales, or a balance. You have seen printed conspicuously on the scales in a drug-store the caution, "Do not speak to the druggist when weighing." He has then a work on hand which, with the best instrumental helps, taxes all his powers. The teacher, in his chair, while the pupil is taking his seat, weighs his work as in a balance and writes down the result in an accurate form. Surely this is a delicate work, even though it be often roughly done. There are as many ways of hearing lessons as of saying them. Let us suppose a trustee, or overseer, to be in the room, whose duty is to weigh the teacher's intellect and skill during the hour. Let this be done regularly. Let the gross result be entered on the trustees' books. Let it, in numerical comparison with similar records of the worth of his colleagues, be exposed to their view and the view of their friends. Would that probably work well? Again, let a dozen teachers who daily practice this method be called on here, for example, to grade numerically the next sermon or speech they may hear. Let each give his estimate, and then let all these estimates be compared. It may be that in the different figures given, some might see reason to suspect that numbers can be used for such purposes only by a coarse and rough accommodation. Seven dollars, seven feet, seven inches,—each of these phrases has a distinct, recognized meaning. But 10 being a perfect lesson, a particular lesson is marked 7. Now this is necessarily a movable, variable, unknown quantity, largely influenced by the "personal equation" of the estimater. Figures give us back, faithfully, accurate results only when we put accurate meaning into them at first. You do not secure mathematical accuracy by dealing with mathematical symbols. There is some danger, too, let it be said in passing, that this feature may be carried so far as to sink the teacher in the examiner. The teacher is above the examiner. The helper, the friend, the inspirer is above the weigher, the marker, the rewarder, the disappointer. Some estimate, of course, may be made and kept. But let it not suggest, in form, an accuracy and precision which is simply impossible in substance.

It is sometimes said that society is constructed on the plan of prize-giving, and we do well to train our pupils in it. If it be true that the prizes that life offers to the generous and the aspiring are assigned in the same way with college awards, the question may still be asked, whether it is best to practice this in early life. It is a very difficult point with parents and teachers to determine at what time, and in what manner, the young may most safely make the needful transition from "negative innocence to tried virtue." It does not follow that we should put into our educational scheme every hard feature of life. We need not attempt to produce, by way of anticipation, in the sheltered harbor of a college campus, the storms that vex the open sea of life. These will come soon enough. There is a golden mean,—and like other golden means it is not easy to find,—between ignoring actual life and prematurely thrusting the young into it. We need not send boys to the demons, who infest the walks of men, to be tormented before the time. Let us by all means prepare the young for real life, and not for Utopia. Yet, let us not push them into life while preparing them for it.

Is society, however, constructed on the prize plan, as our college usages embody it? In every country there are fewer good places and appointments than there are inhabitants. Of necessity some, many even, must do without them. The family circle, the schoolroom, and the college community all abound with excellent preparation for these disappointments. In the roughest country schoolhouse there are warm seats in winter, and cool seats in summer, which only a few can secure. All others must be contented without them. The plays, associations, and societies of boys and young men have many assignments and elections which leave some in disappointment. All these give a fine training for the prizes of after-life. But do we often find in mature life prizes and choice positions that are decided by close examinations? For instance, quite recently there was a vacancy in the faculty of one of our historic universities. Rumor says there were not less than twenty applicants. Of necessity there were nineteen men more or less seriously disappointed. If these twenty applicants had been subjected to a prolonged examination which was numerically estimated; if the result had been announced in the form of a list of names, the successful name coming first with its arithmetical value opposite, followed by the others at irregular intervals of units and fractions, there would probably have been not only nineteen disappointed men, but perhaps as many mortified men, and almost as many indignant men. The trustees who filled that vacancy will not declare that the man of their choice is demonstrably the best Greek scholar in the list. There are two material difficulties in the way of such an assertion. 1. The trustees have never had the privilege of comparing him with each of the others. 2. If this opportunity had been offered, many of those trustees would have the truthfulness and courage to confess that, in the matter of measuring higher Greek scholarship by fractions and hair-breadths, they were not expert.

These valuable places in life usually depend on reputation, on a generous exaggeration of a man's worth, by his friends, to be generously discounted by opposing opinions and preferences on the part of the friends of other men, and on other influences and elements. College life will afford ample room and time for the frequent rehearsal and practice of these lessons. We need not gratuitously furnish our students with tests and prizes, successes and failures, mortifications and triumphs, involving a sharpness and insidiousness not often found in the competitions of real life. It may not be best to subject our children to tests, under which the patience, temper, and genial tone of their fathers might give way. The least objectionable prizes are, perhaps, those awarded by a committee of strangers for a single specimen of oratory, for instance. It has been wisely suggested that it might be best to give to the body of students some voice in the assignment of prizes for scholarship. A special reason for this is, that students know, as the faculty can never know, the habits of study of their associates. They might sometimes be able to throw light on the secret genesis of an imposing examination-paper. A general reason is, that this will be one step toward making the whole procedure more like real life. It would become more impersonal by the number of the judges. It would approach more closely to the free criticisms, the compensations, the checks of a popular election. Arthur Helps truly says, "If honors were supposed to be given strictly according to merit, that would aggravate the discomfort of the unsuccessful, that is of the great majority of us in the world. At present men find ready consolation in the thought, which is a just one, that not only is merit frequently left unrewarded, but that oftentimes it stands fatally in the way of worldly success."

Where is the office, in Church or State, that we can confidently promise to our pupils on the condition that they can safely pass a close examination on any branch of learning, or in any test of character? We can only tell them that, in proportion as they are faithful to their individual endowments, the probabilities increase that they will stand among those from whom society often calls men to places of profit and honor. Let us come more immediately to the question by speaking of some features in the prize-system:

1. *Very few are affected by it, in any way.* Not one student in ten aims at a medal or an honor. The great majority of students steadily refuse to respond to any such appeals. The great body of college-work is done without any help from prizes. If so homely an expression may be used, the prize-system, if intended to prize up the average mass of students, is a conspicuous failure. And it is only in a narrow range of effort that these inducements can be offered with any propriety. You cannot offer a prize to the most generous, the most truthful, the most unselfish, or the most humble. You offer them only for accom-

plishments and achievements, which, while they rank deservedly high in the technical estimate of school-life, sink to a subordinate rank when we take a wide and generous view of life in all its manifold relations.

2. Let us notice this system, as it affects the *successful* students. These are, of necessity, a small part of the few who try to gain prizes. Only the smallest part of the small fraction can succeed. These must run the gauntlet of dangers in failure or success, such as the danger of over-exertion with its remorseless penalty on body, mind, and morals; as also the danger of neglecting other duties just as important as the one marked with the golden label. We suppose the student to safely avoid all these risks, and to succeed. It must now be said that he has been urged by motives not the highest. Generous natures may respond to such appeals, but they are generous in spite of this disposition, not by reason of it. This successful man has studied chiefly to outstrip his fellows. Cases are almost unknown where a student has declined a prize, saying, "I have not studied for this. If you pronounce me first in the group where I stand, that is an incident or accident that did not enter into my calculation, and which I do not value. Let thy reward be to another." The student in such cases is moved mainly by the resolution, "I will be first." And this is very near to another, "I will not be second." He who begins life with these selfish maxims, prepares the way for chronic restlessness and for final defeat. It cannot be the will of our Creator that each one of us should try to be first. Earthly society becomes like a pandemonium, in proportion to the number of men who act on these avowed purposes. Our country does not need a generation of men who are set on fire by this energy. We talk often about the evils of ignorance. They are many and fearful. We may, perhaps, overlook the unhappiness of the man who is stimulated by the fierce competitions of educational life, and who rushes into the great world with complacent and exaggerated views of his own abilities and claims, yet little fitted for the common work of life. In a peculiar sense the venerable proverb is true to him, "He that increaseth knowledge increaseth sorrow."

It has been well said "that the heart has some intellect, but the intellect has no heart." The play of fierce passions may be as keen in intellectual contests as on the race-course or at the gaming-table. Sometimes the dreadful reaction comes on at once. The prize is scarcely in the hand when the disappointing "*Is this all?*" springs to the lips, and the envied hero of the crowded chapel, with the generous applause still thundering in his ear, is not a happy man. The strain on body, temper, mind, and spirit is often severe; and after all, the proof is only that he is in some respects above those immediately around him. The prize has no absolute meaning or significance. It is only relative. It only means that his classmates know less than he does. It gives to society no proof that he is learned, or even a lover of learning. Thomas Carlyle, long ago, said that "He is not a strong man who takes convulsions, though seven men cannot hold him; but he is the strongest man who can take up the heaviest burden and stand the longest under it." He is not the best student, or the most generous lover of wisdom, who, to gain a palpable prize, can spend a few sleepless hours. He may do that and still shrink and shrivel up into a keen, cold, selfish, even sensual man.

3. Let us look at the system as it affects the *unsuccessful.* These make up the great majority of all who are moved by prizes. It is an unfortunate feature of a system that dooms necessarily the great majority of its followers to disappointment and defeat. Just in so far as these have studied for prizes they have the painful sense of failure. There are not a few, we hope, who, with the generous elasticity of pure-minded youth, can instinctively throw off the temptation to consciously wrong tempers and feelings. But we have to speak of common men and natural tendencies. Trench says the doctrine of human depravity may be proved from the dictionary. Perhaps the words in common use by those in prize-rings may bear testimony to the dangers that lie in this stimulus. Those who strive together are apt to fall into strife. Contending leads to contention. The common word *contest* is ominous, and so are *triumph*, *victor*, and *defeat*. Zealous and jealous sound very much alike. Animation in such efforts may easily lead to animosity. The literal phrase, "One ran against another for the prize," suggests the possibilities of collision. To sum up the result of a struggle in the statement, "John beat William," is ambiguous and suggestive. The English phrase, "Senior Wrangler," is, to say the least, not a very happy name for a peaceful victor. The words *fellow-students*, *classmate*, are softening, educating, uniting. But the words *competitor*, *rival*, are not so. If you try to say *fellow-competitor*, or *rival-mate*, you perhaps commit an etymological as well as a moral solecism. Many competitors do, perhaps, withstand the tendency of all these antagonizing impulses. But they, above all others, did not need prizes to draw them out. He who has a moral tone which enables him to "breathe in tainted air," could surely have been aroused by some of the many appeals which can be safely made to students. Surely, motives can be offered which are free from these obvious dangers. All the noblest rewards offered to our race, in the

sphere of moral interests, are free to all. If I lose mine, it cannot be because another has come in before me. It must be because I am slothful or faithless. Cannot the ideal college world be a broad plane, or a succession of high planes, on which many may find ample room to walk abreast? Why make educational life a sloping, slipping pyramid, on whose sharp, selfish top only one human being can stand? Give full scope to all the best native impulses of the young, which will urge them to say cheerfully to their fellows, "Come, let us all go upward." Do not lead them into the temptation, where one is urged to say to his friend, "My success depends on my getting ahead of you." Southey used to show his rare old volumes to friends, saying, "You never saw that edition before, did you?" and when the expected answer came, "No," he would say with the naturalness of a child, "I would be very sorry if you had seen it before." It is not best to place the young student where he is tempted to say to his friend, "I am very glad your knowledge was not greater." We quote again from the wise pages of the late Arthur Helps: "The riding-school seems to furnish a good model. Put a bar up and say, 'All those who leap over this shall be considered good horsemen,' and then the youths who do succeed in leaping over it will congratulate one another and have a feeling of pleasant companionship rather than a bitter rivalry with each other. You may have as many bars as you like, of different heights, in order to test different degrees of excellence in horsemanship; but do not inquire too curiously into the exact merits of each individual rider, nor seek to put him in what you may call his proper place. That will be found out soon enough when they all come to ride across country,—the difficult country of public or professional life."

4. The prize-system in its relation to the body of the students is, at best, negative if not positively hurtful. You lose for them the healthy example of your foremost men, who are obviously moved by the prizes. The common men stand off, take sides, perhaps bet on results, but are not quickened by the artificial zeal of their ambitious fellow-students.

5. The relation of this system to the public may be very briefly noticed. At a late commencement the distinguished gentleman invited to address the societies was asked to act as chairman of the committee to award a prize. He declined from motives that met the sympathy and approval of thoughtful men. There is, perhaps, some danger that the excitement of winning and bestowing prizes may bring into our educational assemblies, on commencement occasions an element and an atmosphere not the most favorable to the best educational work.

It is readily granted that this system has some good results. For example, in England it may do something to break the arrogance of an aristocracy of birth, while with us it may be useful in tempering the pretensions of an aristocracy of money. Many years ago, a young teacher whose select school was gathered from the families of a few wealthy planters and their overseers, said to a friend, "The overseers' children took all my prizes." But it is worthy of earnest inquiry, whether all that is truly valuable in this respect may not be gained by the inevitable and healthy gradations of intellect in educational life without the dangerous influences of the prize-system. Let it be noticed, too, that the good effects of these expedients are readily seen, while the evils may not be apparent to the ordinary observer. The good is not extensive while it is obvious; the evil is intensive, while it may be easily overlooked. This system may promote that knowledge that puffeth up, but not that charity that buildeth up. Our country will never perish, or suffer greatly, from a lack of higher scholarship. It may greatly suffer in the future, as it has in the past, from lack of charity. President Porter says, in substance, the two great aims of college-life are character and scholarship, but character before scholarship. These sharp competitions may increase the one at the expense of the other.

6. We have left to the last the most important inquiry in this whole discussion. We now, without controversy, admit as true, and as underlying all that is valuable in our educational labors and successes, the fundamental doctrines of the Christian religion. We quietly assume the major premise, "Whatever is contrary to these principles should not be embodied in our educational scheme." In discussing the minor premise, "This or that is contrary," etc., we may, of course, often meet varying opinions of wise and good men, and shall often need all the wisdom, prudence, and charity we can attain. Will the doctrine of the New Testament, fairly and wisely interpreted and applied, encourage the system of prizes? We are contented to leave hearers and readers face to face with this decisive question. On next Sunday many thousands of our pupils will read that striking incident where an unwise mother asks for her two sons a prize which was withheld. Perhaps some of those who study that instructive lesson in its Sunday light may be embarrassed, offended even in the Scripture sense of the word, when they close their Sunday text-books and go into the machinery of school-life. You can easily imagine a devout young student praying for light and help in his earnest studies. That good teacher and good man, Thomas Arnold, said there is no grander sight than to see God's blessing enriching

ordinary powers that have been sincerely devoted to His service. Can you imagine an intelligent student praying to be made a victor in a prize-race?

All the evils we have spoken of may not meet in every prize, or in every institution, or in the experience of every teacher. But the tendencies are necessarily and ineradicably there. Can we not urge more earnestly and more successfully than we have yet done, all the affluent, unfailing, educating motives that may be drawn from a desire to promote the "glory of the Creator and the relief of man's estate," while we appeal less to questionable motives and rewards? In other words, "Is THE PRIZE-SYSTEM, ON THE WHOLE, THE BEST FOR COLLEGES?"

THE FUNDAMENTAL THOUGHTS OF PESTALOZZI AND FROEBEL, AND THEIR RELATION TO PRIMARY SCHOOLS.

BY F. BEUST.—(TRANSLATED BY MARION TALBOT.)

Much has been written about Pestalozzi and Froebel; nevertheless the fundamental ideas of these two pedagogical reformers and their methods of conducting schools do not seem to be clearly understood. If we attempt to test our schools by their conformity to the ideas of these distinguished men, we are obliged to admit that such schools are even at the present time the exception rather than the rule. In Zürich recently it was seriously proposed to remove from the common-school that branch of knowledge, the science of space, or geometry, upon which these masters founded their methods of instruction. Accordingly it will not seem a superfluous task to attempt to make a simple and direct presentation of their fundamental thoughts as shown in their school-practice, and to indicate how these fundamental thoughts may serve to-day as the basis for school-practice; or, in other words, how the transition from the kindergarten to the primary school may be properly mediated, and the aptitude for the work acquired in the lower made useful and further developed in the higher grade. In theory almost the entire body of the younger teachers agree with us, but the point in question is to prove that this transition is not only desirable, not only possible, but may be a matter of fact and present in practice.

A deep seated, practical love for their fellow-men caused these two great men to rightly estimate the social evils of their time, and made them resolve from their youth on to attempt a reform in thought, opinions, and actions. In order to bring about a condition worthy of the human race, they began with the most varied development possible in early childhood. Accurate sight, true perception, firmness in volition, and necessary achievement of good through action, is the goal to which they sought to lead mankind. They were both born at a time when the people were still unjustly subject to their masters; the majority of mankind was still living in a condition which did not differ essentially from bondage. They saw the ruin of the old, decayed social system of France, and lived in that violent and stormy revolt against injustice acquired through historical tradition. But both recognized the principle that battles and legislative decrees alone cannot actually free men ; that these are only the preliminary conditions, and that every man must free himself by means of self-knowledge, self-control, and by adherence to whatever he recognizes as true and right.

I come now to the starting-point by means of which Pestalozzi and Froebel desired to lead men to a knowledge of the indubitable. Upon it the whole training as well as the superstructure of knowledge is to be found. In contrast to those teachers who base education upon authority, Pestalozzi and Froebel emphasized sense-perception and the development of the reasoning-faculty. They considered that it was a necessary duty to make known the truth existing in simple facts. Of all truths which human perception, thought, and investigation have recognized as fixed and established, none are so simple, clear, and comprehensible as those which pertain to quantities and their relations, or mathematics. Moreover, no science, or rather no exact science, is even conceivable on the hypothesis that we are denied a knowledge of mathematical truths. Mathematics is, besides, the only department of knowledge which not only comes within the range of external sense-perception, but is also the indispensable condition of mental activity, and leads to positive conclusions from the combination of form and content. The validity of a conclusion here appears to be an inevitable necessity, and truth is synonymous with necessity. In its province neither error nor prejudice flourishes. The recognition of such truths, founded on immediate and frequent acts of vision, produces in consciousness a feeling of opposition to error, which gradually extends to all the relations of life. It awakens a delight in truth, and strengthens a desire to maintain the truth under all circumstances. This confidence in truth is not passive, but incites to action. Knowledge thus acquired is of more importance than statements accepted from some authority as a mere act of faith. Its effect appears only gradually ; nevertheless it takes a firm hold of consciousness, and does away, as Pestalozzi says, with wearisome words and manifold devices, which are about as effective in overcoming error and prejudice as is the ringing of bells in averting the danger of a storm. Truth may, indeed, be sought and found in other ways, but even a partial knowledge of mathematics does not endanger veracity.

The importance assigned to mathematics was widely recognized at the time. In 1802 Herbart of Königsberg wrote a book entitled *Pestalozzi's Idea of an A B C of Intuition*, in which he showed that the development of the intuitive faculty is quite within the province of mathematics; but, instead of following the path laid out by Pestalozzi, he presented another, and it is possible that the opposition to both is traceable to this point of departure. Pestalozzi united mathematical intuition with a perception of spacial and numerical quantities, principally with the square. Froebel also developed this intuition by means of special quantities, but employed them in more varied forms. Both, however, use their material almost entirely in illustrating abstract quantities. No object of instruction was so industriously worked out by Pestalozzi, none so systematically planned, as the development of the notion of number, and Froebel used most of his gifts and occupations to illustrate spacial forms and spacial relations. Pestalozzi devotes the second part of his book for mothers to counting within narrow limits (as far as to 28). Three tables are used for further observation, the first of which illustrates the system of ten by means of lines repeated in tens. The second shows surfaces in a similar way; and in the third fractions are indicated by a square, and divided perpendicularly and horizontally. These tables were not as large as a quarto sheet: they were placed upon card-boards and were given to the children, one for every two scholars. Pestalozzi said concerning their use: "The exercises with the second table practically employ the child's power of counting and measuring which has been acquired in comparing sections of straight lines, in determining the relations of the width of the square and each division of it to its length, and *vice versa* its length to its width. The exercises with the third table occupy the child in comparing the sections of the straight lines and in determining their relations to each other." In using the third table the child learns to apply the same relations with which he became familiar in using the table of lines and in estimating the area of the square and its divisions by determining in respect to each section (1) the relation of its width to its length, and *vice versa,* and (2) what relation each section so determined bears to the whole square. It does this by saying, when pointing to one of the six divisions made by dividing the third square by one horizontal and two perpendicular lines, "The width of this rectangle, which is a sixth part of this square, is equal to twice the third part of its length, and *vice versa;* the length of this rectangle, which is a sixth part of this square, is equal to three times half its width; or the length of this rectangle, which is one-sixth of this square, is equal to its width and one-half of its width." Afterward the child shows that he understands the reason why he has determined this relation in this way as follows: The width and the length of the square are equal to each other; the length of this rectangle is equal to half the length of the square and therefore to half its width, and the width of this rectangle is equal to a third part of the width of the square, and therefore to a third part of its length. Accordingly, the length of this rectangle is one-half and its width one-third of the entire length or the entire width of the square. But one-half is three-sixths and one-third is two-sixths, and three-sixths are three times one-half of two-sixths; therefore the length of this rectangle, which is one-sixth of this square, is equal to three times one-half of its width, or three-sixths are once two-sixths and one-half of two-sixths; therefore the length of this rectangle is equal to its width and one-half of its width.

The system of instruction in the relations of numbers occupies three volumes of about seven hundred pages, and seventeen thousand propositions; that of measures two volumes of two hundred pages, and five thousand propositions; which are all, after having been made clear by reference to the tables, to be stated in the manner designated and repeated by the children until they are thoroughly mastered. "The teacher has nothing further to do than to give a clear explanation to the children of what he states to them, and to practice the children with every sentence, until they attain the greatest fluency."

Pestalozzi had more in his mind in relation to these exercises than mere counting. He says, "This subject has been so unjustly criticized that I must repeat that the real aim of these exercises is throughout to develop the reasoning faculty from the reasoning tendency in man, and that it is not right to look at them from a narrow point of view and consider them merely a new way of teaching children to count. To be sure they learn to count by means of these exercises, but they learn more than merely to count,—to think; and by means of these exercises they are to learn to count only by thinking." "These exercises go so far as to develop the power to perceive relations. In order to apply this power to the estimation of the size, weight, duration, and value of all objects in science and trade, as well as to a faculty of expressing the knowledge of the relations of numbers by means of figures, new exercises are necessary, which, however, must be essentially dependent on these fundamental exercises."

Pestalozzi is, moreover, not satisfied with merely looking at the things, "considering the lines and squares as the foundation, and making fixed statements in regard to their construction and simplest divisions," but he adds another exercise, "copying the lines of the quadrangle in respect to this construction and division." Not only surfaces, but solids were subjected by Pestalozzi to careful observation. Beginning with the cube, the regular solids are taken in order as far as the dodecahedron and icosahedron.

I will mention only two pupils of the master who attained remarkable results, — Tillich and Froebel. The former substituted for Pestalozzi's tables the counting-box, or rod apparatus named for him. Prof. Stoyer, the founder of the celebrated university seminary at Jena, says, "This counting-box with its cubes of unity, and rods representing the repetition of the unit and the systematic foundation of a series of numbers, develops so much power in the hands of a competent teacher as to restore to a healthy growth a nature which is backward and has become perplexed and confused through the fault of defective elementary instruction." This apparatus consists of ten series of rows, containing from one to ten. These, however, are not designated by lines, but are four-sided blocks beginning with a cube, which represents unity; it accordingly bears the name *Rod-apparatus.* Tillich's apparatus was authoritatively recognized and adopted by the University Seminary in Jena as well as in many other seminaries. Several books have been written about it, including those in the years 1877, '78, and '79, and its use is obligatory in the schools of the Duchy of Coburg. It has also been introduced into other schools in Thuringia and Saxony, and is used there at the present time.

This apparatus is a great improvement over Pestalozzi's tables. Not only can the teacher show as much by means of it without great danger of fostering a monotonous style of recitation, but the change of forms which takes place before the children's eyes pleases and interests them. Nevertheless in those places where this admirable means of illustration has been in use from 1806 to the present time its full value is not understood,—only a means of illustrating abstract numbers is sought and found in it. The qualities of length shown by the edges, of surface given by the sides, and of solidity are not subjected to minute investigation, though Pestalozzi in his third table drew attention to the sides of the square as well as to its surface, and Tillich's counting-box is in use in the very place where Froebel placed his figures in the hands of the children. The cube represents only the number one, and the rods stand only in the place of the units as far as ten. The teacher and children build with the cubes and blocks, and draw what they have erected, and by its help the teacher gives instruction in counting. The four fundamental operations can be actually performed with the apparatus. But that all attempts to make abstract numbers visible, or to represent abstract ideas are incorrect, is true here. A wooden cube is not "one," the rods are not "two," "three," etc. In this way children get false notions. Pestalozzi himself expressly warned against this misuse. The counting-box should be used as we do our counting-frame.

The greatest of Pestalozzi's scholars and successors is Friedrich Froebel. He goes a step further than his teacher in granting the child's ego its right by allowing him to make the most of his personality. Until then the child was obliged to leave his will, his inclinations, and his impulses behind him on entering the school-house; but Froebel considers children in their totality. He looks upon the child's impulses and will as important educational factors. He obtains an influence over the will by exciting the tendency to activity in the form of the tendency to play, and calls to his aid that of imitation. Since all development postulates form, he makes use of exercises in form, and in them makes his law of contrasted similars evident. He not only permits but arouses the impulse to make something new from one's own device; in this way he makes the children take the initiative. We must thank him, too, for removing the school into the garden and into the free air. He, like Pestalozzi, employed lines, surfaces, and solids as material for inspection, but these are meant to be not only looked at and copied, but to be used as instruments for representing forms of life, beauty, and knowledge.

In passing to a consideration of the transference of Pestalozzi's and Froebel's fundamental ideas to the elementary schools, I must use my own school as an example, since I know of no other which has undertaken the task of carrying on a systematic development of the ideas and exercises of Pestalozzi and Froebel. By this I do not mean to say that such schools do not exist.

PESTALOZZI'S EXERCISES IN OBSERVATION AND FROEBEL'S LESSONS IN FORM, IN MY OWN INSTITUTION.

Above all things we must remain true, even in the elementary school, to the mathematical principles established by the two great teachers. If we persist in establishing what is true, respect for what is right and the impulse to do what is in keeping are the result. We must also adhere to the principle of a real observation of nature. All development is founded upon form, all culture upon work. Let us train our children to formative work, so that, as conscious members of our nation, they shall be capable of participating by their toil in the acquirement of the highest aims of culture. We must strive to make every school a living organism which shall endeavor to attain the goal of educational aims by a well-considered plan and by means of a common activity, and at the same time feel that it is a separate organism with its own functions.

The Mathematical Foundation. — We adhere to direct observation as has already been stated, but we differ essentially from Pestalozzi and Froebel in one point, since at first we entirely dispense with the abstract quantities. By means of constant familiarity with quantity in various forms, the children become able of themselves to turn their attention from concrete masses and make use of abstract numbers. There is sufficient opportunity later for giving them an extra impulse. Since the time of Pestalozzi and Froebel, incidents of every kind have come to our aid to make the right way more easily discovered. I mean the gradual generalization of public standards of measurement as they are applied in the trades and sciences. The use of numbers and prices has been greatly simplified since the introduction of the metric system. Perfect familiarity with the relations of quantities is possible only through an intimate knowledge of these different kinds of measures; therefore it seems most natural to spare children the roundabout way through abstract numbers, and to combine the knowledge of the relations of quantities directly with these measures. In order to accomplish this I have spared no labor or pains, for more than a generation, to reconcile pedagogical aims with the capabilities, inclinations, and impulses of children, as well as with practical needs, by adapting the material which has been handed down to the spirit of the age, or striving to devise something new, yet all the time advancing in the direction adopted. The arrangement and preparation of such unusually simple things, taken from practical life for use in school, frequently involved difficulties which were quite unexpected, and sometimes could only be overcome by my taking upon myself the work of joiner, wood-carver, and locksmith. I have, myself, made one thousand little rods and regulated thousands of gram-weights. I have, myself, designed the greater part of the wall-drawings, as well as a large number of card-board nets for the scholars. Only in this way could I be sure that what I considered necessary conformed entirely to my ideas. We have subjected the material derived from Froebel to a most radical change, in order to take from it its indefinite character. These objects are no longer to represent abstract notions, but they are to render perceptible our system of measures, both collectively and singly. As Pestalozzi impressed it on the mother not to say "This is one, two, etc.," but "This is one rod," "These are two little stones;" we say, "We call the length of this rod one centimeter, and we call the weight of this piece of zinc one gram." All the material is systematically arranged for the children. The child is given sticks one and two inches long, together with a series of lines ten inches long, placed in a little box; later he has sticks from one to ten cm. and a series of lines of ten dm., as well as sheets of card-board of one, ten, and one hundred square cm., eight cubes of eight different kinds of wood, the sides of each one inch or three cm. in length, in building-box No. 1, and a large number of cubes and three and four-sided rectangular blocks of various sizes arranged in three other building-boxes. In order to show to the class the measures of size and capacity in great number and to aid the children in recognizing the forms by looking at them, we have made similar models on a large scale. The weights are shown in pieces of $\frac{1}{100}$, $\frac{1}{10}$, $\frac{1}{2}$, and 1 gram, and then in 10, 100, 1000, 5000, and 10,000 grams, the smaller ones in larger quantity. On every table a balance is hung for two or three children. A large number of mock coins, from one centime to twenty francs, and of bank-notes of imaginary value representing 100, 500, and 1000 francs, are placed in the children's hands in the course of the instruction. I was forced to make use of this false money from the fact that the little ones, who were passionately fond of playing school, played with the real money, which was formerly used, out of school, and tried to make purchases at the baker's and confectioner's, and took pleasure in it. This, then, is the natural means by which the faculty of observation is perfected, which serves for the exercises and unites in feeling the school with practical life.

According to the law of form enunciated by Froebel, everything has a contrasted similar. We arrange our occupations according to this law or seek to be true to it in one way or another. In all our formative work not only the contrast which forms symmetry, but also a thought expressed by numbers which gives a definite expression to the relation of size, stands as a contrasted similar. Thoughts of form and number admit of no doubt by reason of their definiteness and precision. The impulse to action, the fancy, the pleasure of inventing, the correspondence of thought with the thing, the will, and the achievement follow one after another, and afford the child a satisfaction for which nothing can be substituted.

The Mathematical Observation of the First and Second Primary Classes is confined to length, area, size, weight, and money. All three dimensions are united in the cube, while in the rods we consider length alone. Symmetrical figures are not set before the children, but are made by them according to their own designs from cubes and rods, then drawn, and the length and area in inches and centimeters, which are shown in the drawing, are counted and written on the edge as the circumference and surface. Exercises in reckoning in the department of the four operations are practically performed with the objects.

In addition and multiplication, the inches, centimeters, grains, and later the francs, are placed under each other as units. The tens, hundreds, and thousands are at the left, and the tenths and hundredths at the right, according to the order of their value. In addition and multiplication, which is made evident here as the addition of several equal sums, the beginning is to count the lowest divisions as in written arithmetic. If the sum reaches one or more units of the next higher division, they are changed and put in the proper row, so that when the operation is finished the total result is actually before the child and may easily be read off by him.

In subtraction the minuend is placed in order, and the subtrahend, proceeding from right to left, taken away. Where it is necessary to borrow, we exchange and transfer ten pieces of the lower division for one of the next higher.

In division, if we desire to find how many times one number is contained in another the divisor is taken away as many times as possible; but if we wish to really divide, the dividend beginning with the highest class is divided as many times as the divisor requires. Here, too, we exchange units of the lower class if the divisor is not contained in the higher class, and division accordingly is impossible.

The inspection of weights and the processes of weighing precede reckoning with weights. The cubes in the first building-box are distinguished by the kind of wood and weighed one after another, and it is then estimated how many grains 2, 3, 4, ½, etc., cubic inches of fir, beech, and oak weigh; how much one kind weighs more than another; how many cubic inches a piece of a certain kind of wood contains, etc. These operations are carried on with numbers from 100 to 200. In the third primary and first grammar school-class hollow cubes of 1 cm. and 1 decim. in dimension are filled with water and weighed, and the children find, after having of their own accord taken the weight of the empty vessel into account, that one cubic centimeter of water weighs one grain, and one cubic decimeter or one liter of water weighs 1000 grains or one kilogram. Without any help from the teacher, the question whether the contents of flasks which have been distributed among the class can be estimated without applying the measure of capacity, is answered in the affirmative after a little thought, and the weights are asked for. It is then easy to obtain the required result.

Cubic centimeters of iron, lead, copper, tin, zinc, and brass are weighed, and interesting exercises are based on the different weights thus obtained. Pieces of money are also weighed, and from this the weight or specified sums estimated or the value of money determined from its weight. We have gold, silver, and platinum only in pieces a tenth of a cubic centimeter in size; still they are so accurately made as to answer our purposes perfectly. All calculations in value and price are performed in the second primary class with the aid of the coins, and correspond to the operations with rods and weights. But none of these measures is so rich in instructive material as spacial forms, to which we will accordingly devote more particular attention. The occupation of cutting out figures affords the second and even the third and fourth classes a wide scope for utilizing the fruits of instruction in geometrical forms.

J. T. Herbart, in his book, *Pestalozzi's Idea of an A B C of Intuition*, after proving that the development of the perceptive faculty falls within the province of mathematics, and enthusiastically advocating this idea, asserts that Pestalozzi's square is inadequate, and wishes to substitute the triangle as uncommonly rich in forms even to trigonometric functions; nevertheless for the lower steps of mathematical knowledge the square seems to me to satisfy all reasonable demands as the starting-point for the consideration of surfaces. In the first class the square is cut up into ornamental shapes, either according to folds or without any assistance. Later the peculiarities of the square are examined, and it is pasted in a copy-book. On the opposite page the children write all that can be told of the square, together with measurements and calculations. Nearly the entire subject-matter of plane geometry may be deduced and proved by means of folding and cutting the square. Such proofs are convincing from the fact that they are visible. The figures are ornamented, but may also have borders which adorn them with color and form.

The spacial figures upon which the most comprehensive mathematical observation is based are the solid figures, which seem to have been made for the most varied occupations. In the first elementary class cubes were used to represent the principles of symmetrical figures; they served us in making observations on surfaces. The geometrical body is next to be inspected and estimated in relation to its three dimensions. This material is used from the second elementary class upward. It will be considered in two ways: first as a wooden object to be drawn and measured, and then to be represented in cardboard.

All the blocks in the four building-boxes of which we have spoken are gradually drawn by the scholars from a copy and from sight, and then the length of the edges, the surfaces, and the contents are estimated. No demonstration is made, no rule is given, but careful observation is required and a definite arrangement followed in the progress of the calculation,—a progress which manifests itself as a logical consequence whenever observation is made step by step and the object is talked about and questions freely asked and answered. By ideas of numbers we mean the logical succession of operations made to secure the result desired in examining a mathematical object for the purpose of measurement. Chance considerations do not allow us to deviate from the logic of facts, even though a slight advantage in the calculation might result. Step by step the numerical expressions are reduced to a simpler form, until the value of the whole, comprehended in a single number, brings the end. The mode of procedure is easily shown by an example. We are to make some calculations about a three-sided block, of which there are many in the third and fourth boxes. Its end is a right-angled isosceles triangle, whose equal sides are 3 cm. long. The length of the block is 6 cm. long. At first our measurements will be only approximate, but later they will be given in fractions of millimeters. We will begin by calculating the length of the edges:

$$\begin{array}{c} 3 \times 6 \text{ cm.} + 2 \times 4 \text{ cm.} + 4 \times 3 \text{ cm.} \\ 18 \text{ cm.} + \quad 8 \text{ cm.} + \quad 12 \text{ cm.} \\ 38 \text{ cm.} \end{array}$$

In measuring the surfaces the children do not only imagine the surfaces to be divided into square centimeters or millemeters, but make these divisions in the first place. There is one side larger than the others, inclosed by two lines four cm. in length; accordingly it measures 4×6 cm.^{2} (1) The sides of the other two rectangular surfaces measure three and six cm.; accordingly the sum of their measurements is $2 \times (3 \times 6 \text{ cm.}^2)$. The two right-angled triangles, whose equal sides are three cm. long, give $2 \times \frac{3 \times 3 \text{ cm.}^2}{2}$. The total surface measures

$$\begin{array}{ccccc} 1 \times (4 \times 6 \text{ cm.}^2) & + \, 2 \times & (3 \times 6 \text{ cm.}^2) & + \, 2 \times & \frac{3 \times 3 \text{cm.}^2}{2} \\ 1 \times \quad 24 \text{ cm.}^2 & + \, 2 \times & 18 \text{ cm.}^2 & + \, 2 \times & 4\frac{1}{2} \text{ cm.}^2 \\ 24 \text{ cm.}^2 & + & 36 \text{ cm.}^2 & + & 9 \text{ cm.}^2 \\ & & 69 \text{ cm.}^2 & & \end{array}$$

In estimating the contents, we imagine the bottom surface to be filled with as many cubic centimeters or millimeters as it will contain, and the same number to be placed on top of these as many times as the height will permit. The block contains, therefore,

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[1] According to a national decree square measure is denoted by the exponent 2, and cubic measure by the exponent 3. For cm.^{2} our children say centimeter twice measured.

$$6 \times \frac{3 \times 3 \text{ cm.}^3}{2}$$
$$6 \times 4\tfrac{1}{2} \text{ cm.}^3$$
$$27 \text{ cm.}^3$$

The Construction of Objects, from cardboard, follow these calculations. Before we had systematized and graded this department of work and had attained a certain skill in making practical representations, we attempted to use clay for the forms of knowledge; and then by means of knife, plane, and file to transform plaster, which had been poured into plates and fired, into forms of life, beauty, and knowledge. Exercises with peas were also skillfully conducted. But the effort required to make these geometrical bodies with suitable precision, and the hope of securing greater gain in an educational point of view, caused these occupations to gradually fall into disuse, in spite of the fact that the practical exercises proved quite satisfactory. Geometry with the scissors affords a wide range to the perception of spacial forms, makes use of the existing mathematical knowledge, enriches it with new facts, and makes demands on the sense of neatness and order which every child gradually feels the need of fulfilling. Here, too, we start with the cube. The first task consists in thinking of the outside of the cube as removed and spread out so that it can be again placed like a covering around the mathematical, and therefore immaterial, cube. The act follows close upon the thought. If in the supposition that the size of the cube has been fixed by the teacher, the net has been accurately drawn on cardboard with the help of linear and angular measurements, it is cut out and the pieces are joined. The figures are drawn from a copy and from sight, and, as in the case of the wooden blocks, the length of the edges, the area of the surfaces, and the cubical contents are estimated This operation is repeated with every figure. At first it is extremely simple, but gradually requires more complex constructions, which are to be discovered by the children themselves. Differences in power of observation, judgment, and invention, and especially in determination and dexterity, occasion very different results. One child requires several weeks, or even months, before he makes and draws a net satisfactorily, while another finishes his figure in an hour. It is the teacher's task to measure every net accurately, and to so guide the work that the new result can be almost immediately determined as the consequence of correct progression.

In the third elementary class the cube is divided in different ways, and a new method of combining the pieces is devised; in other words, a new figure is made which represents the result of the separation and the combination. All these figures are square and rectangular blocks. Triangular and rhombic blocks are used in the next class. A difficult task is given to the second class above; viz., the separation of the cube into three congruent pyramids, in order to show how the cubical contents of a pyramid, may be calculated. Then the cube is cut into four congruent pyramids and the remainder is shown. Finally a regular tetrahedron is obtained.

A large number of figures may be deduced from the cube. If its edge is given, the length of the edges of the new figure does not always directly follow. The excellence of this kind of instruction in observation lies in the fact that children are put in the way of turning their attention to scientific discoveries. Scholar and teacher have the satisfaction of seeing the fruit of their intellectual and manual activity assume a definite form, and the teacher can make perceptible and intelligible, in fact and in practice, the whole department of geometry, at least as much as is prescribed in our public schools as far as the second class in the secondary school. Mathematical intuition is here brought to a close for the time. I cannot, however, leave this subject without calling to mind the work carried on by August Salberg, of Münich. In 1874 he published a work of over three hundred pages on *Methods of Computing with Numbers from 13 to* 30, and closes the introduction with the words, "May this work promote the moral elevation of the people, the awakening and liberation of the human faculties, and the exaltation of the mind." Throughout his work he founds the development of the notion of numbers on direct observation of the national standards of measurement. He discards the use of lines, balls, beans, etc., and requires the children to learn to count from coins, measures, and weights. The book appeared a year after the Vienna Exposition, and says of the tableaux which were exhibited by me there, and later in the Swiss Educational Exhibition, "The fundamental propositions of the methods of computation are no longer unfamiliar to Swiss teachers, who were distinguished at the Vienna Exposition by their excellent system of instruction. They teach reckoning by means of appliances, and at the same time with coins, measures, and weights." He then describes my tableaux minutely, but errs in supposing that these are hung up in sight in the school-room. All the consequences which he derives from this idea evidently do not take place. "Reckoning," according to him, "is nothing but instruction in observation and speech;" according to us it is at the same time an active occupation. The decimeter and meter, which are divided into the customary parts, are used for the measure of length. He begins with the quart, or quarter of a liter, as the measure of capacity. This quart is made of cardboard, wood, or glass. He starts with the decagram for weights. Chalk, cut into pieces weighing from one to ten decagrams, is weighed in sight of the children. After the decagram the grain is used. These pieces of chalk are also divided into the usual fractional parts and wrapped up in a paper. Sand is weighed in paper bags, on which the weight is written.

Although I do not agree with all of Salberg's ideas, yet I am glad to mention him as an earnest follower of Pestalozzi, from whose methods every teacher may enrich his knowledge and derive new courage for his work. The calculations, moreover, are, according to Salberg, practically performed, although the children do not all work them out at the same time. The different measures of capacity are filled with sand, and it is estimated how many times the contents of one is contained in another. After that there are exercises in addition, subtraction, multiplication, and division. Very systematically and gradually each number is taken in its relation to the unit of different measures, and calculations made according to the following plan: 1. Comparison. 2. Distinction. 3. Deviation. 4. Aggregation. 5. Divisibility. 6. Multiplicity. 7. Division. 8. Summation. 9. Resultant.

Direct Observation and Productive Work in Relation to other Objects of Instruction.—I can make only a few suggestions at the present time. All branches of instruction must be subservient to the aim of education. The starting-point for all should be observation and practical ability; and self-confidence, tempered by discretion, should be cultivated by means of exercises in form.

The kindergarten children take afternoon walks with the first and second elementary classes, and look for little stones and leaves and flowers of a certain form or color, according as they are directed. The little ones press the various parts of plants, fasten them into a copy-book and copy them. Models of houses, $\frac{1}{200}$ and $\frac{1}{500}$ of the natural size are copied, shaded, and painted. Definite precincts and localities are represented by means of these houses, building-blocks, and rods. In this way whole streets and quarters are built up, first of all with the school-house, of which there are countless models on both scales, as the center. The sand-heap is used in making elevations, digging tunnels, and introducing considerable variety in the exercise. There must be a counterpoise to the development of acute and searching perception, to the investigation of facts, to the search for the truth, to the decisions and conclusions, to the development of the impulse to help one's self and to work for one's self, or the feeling of independence, and to the gradually-appearing consciousness of the personal ego. This counterpoise we find in the consciousness of belonging to an organized company. Froebel organized his little troop; let us do the same. Froebel led his company into the garden. Because our pupils are larger we will lead them farther. Over hills and mountains, into the valleys, through meadows, orchards, and forests hastens the merry throng, not as an unmanageable crowd, but as an organized company. We do not propose to afford a show for the envious, and we avoid every kind of ostentation. I expressly require of the school-party that there shall be no waving of banners, and that nothing shall happen to attract the attention of the public.

The mainstay of all instruction beyond the third elementary class is found in school journeys. There are twenty-eight excursions, which are repeated quite regularly for the greater part. Every year six or seven all-day trips are made. Thus the children become familiar with almost the entire area of the canton of Zürich and the outlying parts of the neighboring cantons. The country is explored in every direction for a considerable distance, for little children are born discoverers and naturalists. The chief good is in natural history and geology; still history does not go empty-handed, and admirable material is afforded for instruction in language.

Our organization makes it possible for children to be free and unrestrained in their movements, and able to follow their impulses without disturbing the whole company. Organization enables the leader to gather the whole troop about him at any instant, and guide it according to his will. In a few minutes the scattered botanists and insect-hunters may be collected in an organized squad, which then marches orderly, according to the word of command. No one lags, no one straggles, although we have many times made the ascent of all the high mountains in the vicinity with children from eight to twelve years of age. One who is inclined to ask whether the little ones appear exhausted and fatigued after a long journey, should see them when they have been on their feet from 6 a. m. to 8 p. m. But the cost! Our trips are a means of instruction. No one is allowed to buy anything. Scholars and teacher alike share in the food which each one carries with him. The general expenses are defrayed from the traveling-fund, to which each child pays ten centimes weekly, and which is managed by three cashiers chosen by the scholars. These trips result in an increased number of observations, and a steeling of the will, in addition to physical and mental invigoration and recreation.

An interesting botanical exhibition usually takes place when the company halts. Flowerless and flowering plants are distinguished and then arranged in classes, orders, and families. The specimens are carried back for the collections, described and defined in the class, and then each child puts one in his herbarium, according to Endlieher's system. The same is done with insects. A map is made of the country which has been explored, and the children's observations are reported orally and recorded in a table or worked up for an exercise, according to the class. Finally, as the key-stone, every scholar in the fifth and sixth classes makes a relievo from the map. In this way the children work over in school what they have perceived in life and what, in spite of exertion and the renunciation of material pleasures, they have enjoyed with a nobler satisfaction. They must derive their knowledge from their tasks and experiences; it grows out of activity and capacity. It does not lie upon the surface and cannot be so easily revealed as technical school-knowledge, but it makes a good foundation for the further development of our youth.

I close with the wish that I may be permitted to glance at the efforts to develop the fundamental ideas of our great pedagogical exemplars and the results achieved. Perhaps the consequence will be that these fundamental ideas and their inner connection with the changes in the relations of life which have been developing gradually since the end of the last century will soon become common property and be incorporated in the flesh and blood of our people, though a century's effort to advance them has fallen short of its ideal.

SCIENTIFIC STUDY AND WORK FOR WOMEN.

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It is needless to speak, in these days, of woman's right to the higher education, neither of the value to herself and society of a thorough and advanced training. If occasionally we hear an utterance of the old prejudice, we do not deem it worthy our time to dispute it. The current of public opinion is strongly set, and we can let the laggards grumble to themselves, if they will, for they cannot check it. We have ceased, too, to be troubled by the maintenance of woman's inferiority to man, because we begin to see that that has nothing to do with the question of her full development. Let it be granted that she is inferior; but until it is also granted that there exists in the cultured world a college or university course which young men are intellectually capable of pursuing, while young women are not, the question of equality or inferiority remains irrelevant. No such course can be pointed out. The difference, if it exists, is beyond the limit of the present educational tests. Those who oppose woman's collegiate education on this ground must promise that colleges are established, not for the average, but the exceptional mind, — for the young man of genius. This is plainly not so. They are established primarily for the young man of average ability, to make him a wiser man and a better citizen. That the average young man and woman are equal in power of mental acquisition and assimilation even the most tenacious upholder of woman's inferiority will not venture to question. The disparity does not appear here, nor yet in the region of talent; one must mount to the level of genius before he encounters the doubt. And until our opponent is ready to maintain that university advantages are designed for minds of inventive power only, his argument is powerless; and this statement he will not undertake to uphold.

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It is thus generally conceded that the higher education is a desirable thing for women. But it is not so generally conceded that the sciences should occupy so high a place in the curriculum. It is my purpose to endeavor to show the value of scientific study for women, both as a means of developing needed qualities, and as supplying the basis of useful and, I hope, in the future, remunerative labor. Grace, gentleness, and refinement are regarded as the especial attributes of woman, and the fear entertained by those who disapprove of the study of science arises from an apprehension that those attributes will not be nurtured by scientific pursuits. Art and literature are looked upon as the more appropriate objects of contemplation for the woman's mind, because promotive of these so-called womanly qualities. Now, I am the last to desire that less of gentleness, or grace, or delicacy should mark the woman's character. Let there be more rather than less. But are we not at fault in assuming that the exactness of thought, carefulness of observation, and reserve of judgment which characterize the scientific attitude of mind are inconsistent with these graces? And, furthermore, in our anxiety lest woman may lose these charms, held to be peculiarly hers, are we not blinding ourselves to other qualities which it is desirable, very desirable, that she should acquire? Her social position is not that of a century ago. Deficencies, then unnoted or undeplored, became in her increasingly-wider relations more conspicuous to the observer, if not more detrimental in their effects. She is graceful, sweet, full of tenderness and sympathy; but is she as simple, straight-forward, and courageous as she might be? The excellent lectures of Francis Power Cobbe, recently published under the title of *Duties of Women*, intimate that these qualities are lacking in English women as a class. I doubt if any of us would assert that American women do not display similar deficiencies. The sharp division of attributes into masculine and femine has affected injuriously our estimate of the manly and womanly character. Is not the sweet and gracious woman, who is also simple and brave, a more perfect type of womanhood? In Tennyson's familiar lines:

> "The man be more of woman, she of man;
> He gain in sweetness and in moral height,
> Nor lose the wrestling thews that throw the world;
> She in mental breadth, nor fail in childward care
> Nor lose the childlike in the larger mind."

[Gambetta, alluding to the education of women, in a speech before the French Instruction League, said: "We propose to give a positive education, an education which shall be made of the marrow of lions. And what is the marrow of lions in our age? It is the result of the discoveries of all the sciences." This exaggerated form of expression, "marrow of lions," is startling but significant.]

Now, I hold that the qualities of simplicity, uncompromising truthfulness, and carefulness of judgment are developed more essentially by scientific studies than by literary or artistic. Nature makes no compromises,—it is strictly obedient to the law of usefulness, sternly undeviating in its course, yet calmly self reliant. There are beauty and grace in all the natural world, but the student comes to believe, even if he cannot in every case point out his substantiating facts, that there is no beauty or grace without its underlying use. He learns the economy of nature, that there is nothing superfluous, no beauty or pleasure without a benefit. "Beauty," said Michael Angelo, "is the purgation of superfluities." We, as women, have great need to learn the lesson of simplicity. If we look beyond the limits of necessary labor, we find alike in town and city a disheartening picture of a vast activity without an aim, of abilities squandered upon petty objects, of an unfruitful restlessness, and a vain display.

[The very beauty of the petal is itself a rebuke to the elaborate costuming of a woman. The petal's exquisite form and coloring are indeed beautiful, — but why? That they may attract the insect, whose presence secures the vigorous life of the species? Why the excessive ornament which marks a society-woman's dress? For beauty's sake, or for art's sake? I think not.]

Nature has no affectation, no seeming, no prevarication, and no gloss. It tells no graceful lies; it does not change its manner for you or for me. Though so simple and so straightforward in its action, nature's vast complication of relations inculcates carefulness of judgment. It soon reveals the tendency and shows the danger of leaping at conclusions. Patient watchfulness, with conclusions held in reserve, is the only security for correct results. Our likings and dislikings can take no part in these researches. We must annihilate prejudice and personal desire. Faraday gives this lesson when he says: "I will simply express my strong belief that that point of self-education which consists in teaching the mind to resist its desires and inclinations until they are proved to be right, is the most important of all, not only in things of natural philosophy, but in every department of daily life." Along with this reserve in judgment comes the habit of taking into consideration remote causes. Herbert Spencer believes that women are by nature predisposed to form opinions from immediate results, leaving out of consideration remoter issues, and for this reason he regards them as disqualified for the suffrage and for control in the larger social affairs ("Domestic Retrospect and Prospect," *Popular Science Monthly*, Sept., 1877). This I believe to be the result of her narrower education and of the weakness of control to which her training subjects her feelings. Strong feeling is not incompatible with far-sighted reasoning. In social questions it would seem essential as a suggester of causes which the unfeeling mind would overlook; but it must be habituated to a well-regulated control. And a well-regulated control is just what has been regarded as, upon the whole, undesirable in a woman. The cry has been, "Let her intuitions, her feelings guide her." [Furrthermore, her subordinate and irresponsible position has tended to develop far-seeing discernment. Without the habits of mind engendered only by the bearing of weighty responsibilities, there is no chance for the growth of a comprehensive judgment.]

But you may ask, "Will the study of science, after all, develop these attributes of mind? Though Nature be self-reliant and straight-forward, will the study of botany or zoölogy unfold these traits in the student any more than the study of history, for instance, whose heroes and heroines display them in human guise?" I answer tha tit is the attitude of mind required by a study, rather than the direct object of study, which disciplines. The attitude of mind in the study of science is not simply receptive; it seeks, it compares, it checks itself, it tries again. It uses imagination, but must control it; it sees what it does not wish to see, perhaps, but must accept. And let me add, that when I speak of the study of science I do not mean the superficial book-learning so universal in our schools a few years ago, but a thorough application, in which the student is made, as far as he goes, his own observer and investigator. Neither do I intend to underrate the value of literary studies, or to imply that they are not essential. But their place is already made for them; it is my object to urge against the prejudice which still largely prevails in reference to scientific study for women. We are afraid it will make our girls rude and ungentle; in a word, will make them masculine. But let us trust in their potential motherhood. The idea that the girl's nature can be changed into the boy's by any system of education is unfounded and unverified. Education cannot unmake, it can only bring out; and the question for us to decide is, what shall we endeavor to bring out? In our girls let us develop strength as well as beauty of mind. Let us do away with the misconception still clinging to many cultured minds, that it is womanly to be timid and weak, to love admiration and display, to be gracious rather than true, and dependent rather than self-reliant. And, at this time, when the health of women is undergoing such trying tests, and threatening more than anything else the cause of her higher education, there exists a strong argument in favor of the natural history studies, because of greater healthfulness. They are out-of-door studies, whose class-book is the field, whose text-book is the botany-box, the net, the microscope. Many a young woman whose physical condition would not allow the usual college course might grow robust in body as well as mind under a well-directed course of study in natural science.

Having urged the advantages of scientific study, I go still further, and advocate specialized study. The tendency of modern educational reform is toward a more thorough and extensive application of a few subjects. I am fully in sympathy with this tendency, and might say much of the gain which I believe would follow such a change,—gain in grasp of mind and completeness of culture over the desultory habit of thought which a crowded curriculum must produce. But that is not my present object. I advocate special attention to one subject in the later years of a girl's college course, because of the benefit which will accrue to her therefrom, in after-life. I believe the one thing now most neeed for woman is some interest or influence which will introduce a more definite purpose into her life, leading to more persistent effort in fewer directions. Her energies are scattered over so large a surface that their exercise lacks robustness and brings about few useful results. Our young women graduates dip a little deeper into Greek or Latin; one year we find them interested in art, the next in history, and so on. Our young men find in their universal calling as providers the incentive which gives tone and concentration to their endeavors. Our girls, as a class, lack this incentive. Some claim that their possible motherhood should take its place with them, and that they should be educated with as definite a purpose to be mothers as their brothers are to be merchants or professors. But this motive can never present itself to the young woman's mind, as a clearly-defined incentive. She cannot count on being a mother. [And I do not believe that any scheme of special preparation for wifehood and motherhood will ever meet with successful application. Motherhood is an essential constituent of womanhood, and whatever makes her a complete woman makes her a good mother.] At least we cannot find here that stimulus which will give direction and vigor to the aims of a young woman whose college days are over, who is not under the necessity of earning her own living, and who has not marriage in view; and this describes a large number of our girls who leave college or school on graduation day. But if she has discovered any bent of mind (and she should be encouraged to make such a discovery), and if, without injury to her general training, she has been countenanced in giving that tendency open way, and has so far prepared herself in the study of her choice as to hold in her control the numerous instruments for further research, she carries with her the incentive for continued application, and the means of constant enjoyment and possible usefulness.

No rambling study can afford the stimulus, the vigor of interest, which is given by continuous application to one favorite subject. This keeps the mind active, the habit of thought regular. There is no slacking of purpose, and no vague questioning, "What shall I do next?" "The high prize of life," says Emerson, "the crowning fortune of a man, is to be born with a bias to some pursuit, which finds him in employment and happiness." The lower claims of social life, so ready with their degenerating demands upon the young woman's time and attention, will find it far less easy to gain a hold upon her.

But, does not special study make narrow? Is not the specialist a social bore? A narrow mind will be narrow in its specialty, but I have no fear for naturally well-balanced minds. Do we not all know specialists whose researches rarely appear in their conversation, far less rarely than we have desired, who would gladly gather something from their storehouses? And if the mind is naturally so circumscribed that it does not perceive the proprieties of social life, is it not, after all, better to be bored with entomology for instance, than small talk or superficial acquirements? This fear seems to me altogether unworthy of consideration beside the gain in intellectual energy, which a definite interest and clearly outlined purpose cannot fail to gain. Enthusiasm is always interesting, no matter how small the sphere of its exercise. A man riding his hobby is not the most undesirable member of society. It is rather the indifferent member, who has not vigor enough to find a hobby.

The advantages for advanced scientific study offered to women in this country are not numerous nor of a high order. Our colleges, as they introduce elective systems and tend toward the methods of the German universities, offer better means for special study. The colleges for women, however, have not advanced so far in this direction. They keep, perhaps not unwisely, on the conservative side, and the greater freedom of the university methods is likely to deter them many years yet from their adoption. But opportunities are not altogether wanting. A good beginning may be made at college. There are excellent summer schools, where much may be gained. The Woman's Laboratory connected with the Boston School of Technology furnishes the best of advantages for instruction in chemistry and kindred subjects; and the school of Technology itself has now opened all its courses to women. It has been stated that in special courses the young women of the Harvard Annex possess, at present, while their number is small, advantages superior to those of the regular students of thecollege.

A young woman interested in biology writes me that four years ago she could find no opening for advanced biological study in this country. She went to Cambridge, England, and has returned enthusiastic over the opportunities for instruction open to her there. Another American woman is now studying in Professor Huxley's laboratory at South Kensington. I read, also, that an American girl is r/ studying under Professor Vichow, at Berlin. The fact that the best medical schools of the United States remain closed to women need not be mentioned; it stands too glaringly patent beside the marked success which women have attained in medical practice.

We cannot but acknowledge that if a young woman desires a thorough and advanced training in science it is her wisest course, if she can afford it, to go abroad after having obtained the preliminary instruction which our schools will give her. But I trust this need not be said many years longer.

I have considered the advantages of scientific study for women. A more practical question follows: What work, what profession does science offer to women? A large number of young women in our colleges go out into the world to earn their own living, and the number is likely to increase. The old prejudice against remunerative labor for women has not wholly died out, and in many families the daughters go home, after their school-days are over, to live parasitic lives upon busy fathers and mothers; giving a little domestic assistance, perhaps, but, upon the whole, filling no really empty place and doing no essential duties. These girls will ere long join the worthy ranks of self-supporting women, who learn out of the beneficent necessity, which we have so long called the curse of Eden, that the best living means usefulness, and that helpful action is the greatest happiness. But first let me say yet another word of the unremunerative scientific work that might be done by women. I have already spoken of this, but from the side of its effect upon character, rather than its usefulness to science itself. Scientific investigation is largely without pay, and will always be so. Women, as a class, command more retirement and leisure than men. Add to this retirement and leisure scientific preparation and love of research, and we begin to see the amount of valuable scientific investigation which women of means might undertake. Recall what Thomas Edward, the poor Scotch shoemaker, has done for zoölogy, and consider the restless and profitless hours in many an able woman's life, and then calculate the amount of happiness and benefit that lies potential in their misdirected efforts.

There exists now a good deal of interest in the development of the infant's mind. Scientific observers, like Sir John Lubbock, have watched the successive steps in the unfolding of the child's intellect and have published them. I have been sorry to note that all such observers have been men. Is there any province more essentially a woman's than this? The questions of mental development, of temperament, of disease, of the effect of temperament upon disease, and hundreds of kindred subjects lie hourly before the mother's eye. No one so well fitted to observe, no one so well placed for observation. I am glad to learn that the Social Science Association has taken this matter in hand and is about to call the assistance of educated mothers to opportunities of this nature lying within their immediate reach.

Then there is the department of household chemistry. The woman in her home has the material at hand for innumerable researches that might result in benefit to herself and the community. This is again her peculiar province, and the only requisites are a good knowledge of chemistry and a small laboratory, which any woman might have side by side with her kitchen. This presupposes time and money; but we are now speaking of the class of women which possess both. And, furthermore, if we subtract from the life of almost any woman placed above moderate circumstances the time now given up to unprofitable social claims we should obtain, a surprisingly large margin of leisure. And one of the salutary results of this devotion to some chosen occupation would be, I believe, the effecting of this subtraction. The better will crowd out the worse.

Women are beginning to hold positions upon school-boards, and their usefulness as advisers in educational matters is unquestioned. This again suggests a field of study and observation, the cultivation of which would make the advent of women into educational influence of greatly increased service.

Education as a science is receiving much attention. Formerly it was held that any series of studies,—the more the better,—pursued in any order, so they were successfully dove-tailed into the appointed period of time, constituted an educational system. Alongside with the study of the natural evolution of the mental faculties, goes the investigation of the best methods for furthering that evolution. Let women, interested in education, make a scientific study of it, and bring to bear in the increasing control they are about to exert in educational matters an intelligence more inquiring and comprehensive than most boards of education at present exhibit. As was said in a speech before the Social Science Congress in Edinburgh, "We want educational as well as chemical analysts."

[Political economy, as a science, ought also to win the attention of women. There is but little doubt that the right of suffrage will be granted before many years. I would that, side by side with every suffrage association there were political economy clubs, and that women would show as much eagerness to prepare themselves for the ballot as to obtain it. That men do not think wisely and do vote rashly, ought not to affect the question. If, in the interval of time preceding the granting of the suffrage, woman could rouse among themselves an enlightened interest in public affairs, and could make themselves believe that there is really such a science as political economy, the knowledge of which does not come intuitively, but demands much reading and thinking; and furthermore, could do something toward awakening in the American mind a sense of the responsibility of the vote, they would be accomplishing an enormous good. The thing most needed in American politics, it seems to me, is to break in upon the self-satisfaction of the American voter and lead him to realize that his judgment may be wrong and his vote may do harm. The contempt which the average voter has for the experience of other nations and times, his scorn of bookish theories, his blind belief in his own conclusions, based upon some interest lying close to his limited experience; these are the dangers which threaten our prosperity more than Nihilism or Popery.

Here, too, is an opportunity for women to examine themselves and find how far Spencer's conclusion, before alluded to, is justified. Are they inclined to decide by immediate effects, without considering remote results? The apparent universality with which women advocate prohibition might seem to indicate such a tendency. Certainly, as influenced by immediate results, everybody would be a prohibitionist. It is only when the remoter effects upon the character of men and of governments are brought into consideration that doubts of its wisdom may arise. I do not say that, after weighing carefully all these remoter consequences, most women might not continue to favor the prohibition movement.]

Of remunerative labor for women, as the outgrowth of special scientific preparation, we cannot say the present offers many examples. The success of women in the medical profession is settled beyond dispute, and demonstrates the need that has existed for them in this capacity. Dr. Bodley's report, contained in her address delivered before the graduating medical students of Philadelphia, gives results of unexpected significance. I need not dwell upon this department of scientific occupation, because its place and value are sufficiently well established.

The calls for women as teachers in special lines will increase as more colleges and higher schools for women are founded, and as co-education becomes more general. Already there are many women professors, worthy the name. Professor means more than teacher; it means special application and experience, and a knowledge extending beyond books. A professor is not only leader in the class-room, he is a co-worker in the front ranks of thought. Practical chemistry seems a profession well fitted for women, and promising to offer remunerative occupation. A lady, who is a professional chemist, and was an influential agent in the establishing of the Woman's Laboratory in Boston, writes that she has all the work she can find time to do at fair pay, and has had at least four offers of positions with good salaries since her graduation. She believes that women fitly trained will not lack paying employment, and she looks for the springing up of new positions, especially adapted to women, such as, for instance, that of physician's or manufacturer's chemist, created by the combination of several physicians or manufacturers for the purpose of employing a permanent chemist to make their required chemical investigations.

A slight incident first suggested to my mind the fitness of dwelling-house architecture as a profession for women; but this suggestion was given by a woman of the conservative type, who was the farthest removed from voluntarily making such an intimation. She was of a phlegmatic temperament, rarely roused to any vehemence of expression; and I was much surprised to find her, shortly after moving into a new house, in an almost towering passion of indignation over the inconvenient arrangement of the rear part of her house. "The most foolish woman in the city, she cried, "would have known better than that." I will not take the time to speak of other occupations of a scientific nature in which women might engage, with a fair prospect of success. I have no facts to show that others have thus far been undertaken by women. I have learned, however, of two or three successful women dentists. Dr. Tibertius of Berlin has a large practice and is employed by the royal family. I have heard, also, of a woman who went west to teach, but led hy failing health to withdraw from teaching, she has undertaken with success the cultivation of grapes. To be sure, agriculture has not been counted a scientific profession, but science is making its way into this domain, as into most others, and I am not sure but small agriculture may yet proffer to women healthy and profitable employment.

As regards this matter of remunerative professional work for women, there undoubtedly rests upon women of a certain class a duty which they owe to their sisterhood. This class consists of those who can afford to wait and push their claims. A large number of young women seeking an education in our higher schools and colleges must begin to earn their living immediately upon closing their course of study. Many, indeed, have borrowed money to enable them to complete their studies. To this class we cannot in fairness say, "Make yourselves specialists," because as specialists they cannot so readily find employment. We are forced to admit that, in spite of the wonderful enlightenment of opinion which the last half-century has produced in the public mind in reference to woman's ability and position, there is still considerable unreadiness to believe that in the higher professions she either can or will make herself as proficient as a man. Even for a professorship in a woman's college, if we place side by side as applicants a man and a woman equally well qualified, the chances are largely in favor of the man. On the other hand, it is also true that comparatively few women have received the necessary training. I regard it as the duty of women of some means, who are in a position to await their opportunity and urge their claims, to make themselves so proficient that their equality with men cannot be questioned. We cannot expect that positions requiring long and careful discipline will be offered to women, if they have not received such discipline. And until women, as a class, do receive it as generally as men, we cannot be surprised that their claims are set aside. But let women fit themselves to hold responsible scientific positions, and let them knock again and again for admittance to the ranks of professional workers. Let them be willing to wait, to meet repeated refusals and rebuffs. Let them bear in mind that they are making a way not for themselves alone, but that they are pioneers and carry with them the cause of woman's activity in the higher planes of thought and labor.

This is the most practical result of all I have said, and the point I would most urge upon young women of scientific inclinations. But not less practical, as regards its effect upon the character and usefulness of women, I believe to be what I have said upon the value of scientific study and work in general. I want to see women bring greater unity of purpose into their lives. I want to see their thought and effort simplified and concentrated. Even those who are of the opinion that motherhood is the only specialty designed by nature for women, need not be disturbed at the prospect of a gain in these qualities of simplicity and concentration. The habit of mind produced by one course of action is necessarily carried over into all. The most important result of education (and no education is of real value which does not give this) is a sense of the responsibility of the individual; and, I believe, a woman trained to scientific habits of thought and to a due realization of this responsibility must needs make an excellent mother. She will know that motherhood is the highest profession the world has to offer; highest in the knowledge it requires, and widest in its influence; and she will not allow a lower profession to trespass upon a higher. Most women, in fact, are brought up to be housekeepers rather than mothers, and it is a painful fact of observation that in many homes the mother is lost in the housekeeper. I do not know of anything which will do more toward developing in a woman a true comprehension of the immense responsibility of motherhood than a careful study of organization, of cause and effect,—that is, of science.

SOCIETIES FOR THE SUPPRESSION OF VICE.[1]

BY HOMER B. SPRAGUE.

"There are hearts to break; there are souls to win
From the ways of peace to the paths of sin;
There are homes to be rendered desolate;
There is trusting love to be changed to hate.
This is the work you have done so well,
Cursing the earth and peopling hell!"

There is a hydra-headed evil, malignant, unresting, yet, for the most part, invisible; allying itself with kindred destructive agencies; subsidizing the strongest appetites and passions; making the youth of the land its especial victims, sparing neither high nor low, dragging them by thousands to mental, moral, and even physical disease and death; existing from time immemorial, but increasing year by year till it has reached gigantic proportions; a frightful pestilence walking in darkness, a horrible destruction wasting at noonday! No organized effort was made in England to suppress it previous to the year 1802; none in the United States until eight or nine years ago. It enthrones the lowest pleasures as the highest good; its object is the promotion of unchastity, the disparagement of virtue, the corruption of the young; its modes of operation are manifold, though unseen. Some of its physical results are discussed in medical works; its mental wrecks appear, to some extent, in the appalling statistics of insanity; but the wide-spread moral ruin, the sorrows, the crimes, the shames,—these are beyond the power of figures to compute.

The mischief is largely irreparable. "None that go unto her return, neither take they hold of the paths of life," said the wisest of kings, himself a victim at last. Is there an occasional exception? The brand plucked from the fire is blackened. The plague-spot may possibly be healed, but the scar is hideous and indelible. It needs no Augustine to tell us that an obscene book, song, picture, act, instrument, once guiltily imprinted on the memory, can never be erased. Banished with strong effort, with prayers and tears, it reappears in dreams till the sufferer sighs with Themistocles for some new system of mnemonics that may enable him to forget, or prays with Banquo,—

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[1] Report of the Executive Committee of the New-England Society for the Suppression of Vice; April, 1882.—Eighth Annual Report of the New-York Society for the Suppression of Vice; February, 1882.—Frauds Exposed, or How the People are Deceived and Robbed, and Youth Corrupted; Anthony Comstock, 1880. Seventy-sixth Annual Report of the Society for the Suppression of Vice (London).

> "Merciful Powers,
> Restrain in me the cursed thought that Nature
> Gives way to in repose!"

or cries with Paul, "O wretched man that I am! who shall deliver me from the body of this death?" And yet the punishment is ever renewed, a perennial source of anguish, the gnawing of a worm that will not die, the smart of a burning that cannot be quenched.

Unlike other forms of iniquity, "the social evil" not only wears a more impenetrable mask, but its very foulness is its immunity. On the one hand, its essential grossness must, for decency's sake, be covered from view; on the other, its deceitful fairness must pass unnoticed, lest suggestion be temptation. So it happens that, not being attacked openly, it is not attacked at all. Multitudes of the best people are hardly aware of its existence. Herein lies the danger of the young. What with the innocent curiosity of youth, the praiseworthy desire for knowledge, the stimulus of natural appetite, the yearning for confidential companionship, the need and the romance of love; what with the unwise reticence, the over-fastidious delicacy, the deceptive silence of parents, guardians, teachers, ministers, friends, on that unmentionable subject which nature continually thrusts upon the attention, and which she compels to be prominent in every boy's and girl's thoughts for months and years during the period of adolescence; what with this utter abandonment of children to pick up from the street, from coarse companions, from vile books, from indecent newspapers, or from worse sources, the needful knowledge of those mysteries upon which they feel that so much depends,—is it strange that the agencies of vice become legion, its shapes multiform, its devices ingenious, its assaults incessant, its victims among the young innumerable? Few and fortunate are those who have grown up to middle age unscathed.

The human swine who wallow in sensuality as their native element are countless; and even a soul as gifted as Byron's could not escape the pollution he thus stigmatized:

> "Thou, born to eat and be despised and die,
> Even as the brutes that perish, save that thou
> Hadst a more splendid trough and wider sty!"

In no age have panders been wanting to these depraved appetites. In every age, too, many a Mokanna has hid beneath the veil of "silver, with her virgin hue," the devilish joy he finds in dragging others down.

"To work an angel's ruin,—to behold
As white a page as virtue e'er unrolled
Blacken, beneath his touch, into a scroll
Of damning sins sealed with a burning soul,—
This is his triumph, this the joy accursed,
That ranks him among demons all but first."

But within the present century a new herd of hyenas have sprung up, driven by the accursed hunger for gold, to feed and fatten on this moral death. Any villain can produce an obscene book: he has but to look into his heart and write. It will sell for ten-fold its cost. Few pure-minded persons have any conception of the innumerable streams which, within the last fifty years, have poured from these dark and deadly fountains; yet many a man will recall the time when some vicious companion or unprincipled vendor whispered him aside, and in the school, the workshop, the counting-room, the street-corner, or some nook by the roadside, opened to him the polluting pages. One of these books, the foulest of foul productions, unheard of by the writer since his boyhood, has recently been mentioned in his hearing by men of high respectability as a recognized and everywhere well-known standard of comparison. In the year 1873, one Dr. Haines, a native of Ireland, a man of education and talent, had for more than thirty years been engaged in writing and publishing some twenty-five obscene books. In the same year died one Farrel, who for sixteen years had been the publisher of over one hundred. These are but samples. How many have been secretly circulated can never be known; but the dealers in them were numbered by thousands; and when we remember, what has been exemplified in repeated instances recently come to light, that a single bad book may pass from hand to hand among many youth and go from neighborhood to neighborhood, the danger from this wholesale poisoning becomes alarming.

Millions of debasing pictures, that seem to exhaust the ingenuity of an imagination set on fire of hell, from the most beastly grossness to the most fascinating forms of licentious beauty, have been in circulation. The pure-minded ordinarily know nothing of them. More fortunate, probably, than most boys of his age, the writer never had one in his possession; but he saw them in the hands of others and heard conversations to which they gave rise. He recalls the forms and faces of some whom such influences led astray; of one in particular, a handsome boy, a favorite among his playmates and in the social circle, exceptionally intelligent, with a genius for music and painting, a heart warm and sincere; but debauched at last, disgusting some and fascinating others by his skill in indecent drawings, astounding an old friend after years of separation by an invitation to a house of ill-fame, wasting his earnings in brothels, sinking into repeated crimes, the tenant of more than one prison, breaking a mother's heart, and finally filling a premature grave.

A very common form of these pictures was in semi-transparent cards, innocent enough on the outside, but when held up to the light exhibiting the grossest scenes. The unsuspecting boy or maiden whom the scheming villain had marked out for destruction was especially liable to be entrapped by this snare.

Microscopic pictures of a lewd character were extensively sold for charms, knives, rings, etc.,—talismans against purity, idols of the worshippers of Chemos and Priapus, emblems of the faith and practice of those "whose end is destruction, whose god is their belly, whose glory is in their shame."

Filthy songs, ballads, broadsides, poems, went everywhere. Every boy could read them, or hear them from some one who had learned them by heart. Some of them have been transmitted from past generations, and grave scholars and learned professors have treasured the precious nastiness. Romance as well as music lent its charm, and bitterly has the truth of the saying been illustrated, "Let me make the songs of a nation, and I care not who make the laws."

Photography had of late years been made an ally. The business of photographing in all conceivable situations of indecency the lowest creatures, male and female, that wear the human form, was peculiarly profitable; a business still followed, if we may judge from photographs seized six months ago in a neighboring city,—and followed, too, in Boston, if we may believe the statements of a vender of im moral pictures recently threatened with criminal prosecution.

A troublesome phase of indecent literature is found in translations of so-called "classics." The vilest books in which Greek, Italian, or French obscenity had been stored up for the ruin of after-ages have been unearthed, translated, and made to do duty in the service of Satan. With these is a swarm of novels whose only *raison d'être* is the glorification of some form of illicit love, the disparagement of wedlock, the villification of pure home-life, the ridicule of conscience, the apotheosis of handsome villains.

> "They bawl for freedom in their senseless mood;
> License they mean when they cry liberty."

Next come the dirt-eaters, each rolling before him his darling morsel of literary filth; disgusted with artificialities and linen decencies, and finding nutriment in *Leaves of Grass*, but not in fig-leaves; so much in love with Nature that, like the poor human earth-worms in Xenophon, they wish to do in public what others do in private, abolish all laws against indecent exposure, and break down the absurd prejudice against sulphuretted hydrogen and concrete nastiness. These are "naturals" and "æsthetics." To these should be added nondescript pamphlets of self-styled reformers who would reconstruct society on new foundations, making each community one great poultry-yard, and so bringing back the golden age of monkeydom and — liberty!

To facilitate this consummation, numerous unnamable articles for the promotion of debauchery and for the prevention of its immediate consequences have abounded in every city and made their way into myriads of homes. Mechanical ingenuity was racked to produce the many forms, whose very existence is a startling revelation of the possibilities of human degradation.

"Lust hard by hate!" Into these four monosyllables the great epic poet condensed a volume of wisdom. Impurity and cruelty are twins. The vice that originates goes hand in hand with the crime that destroys. Innumerable are the drugs and tools for preventing the horrible disease, and for killing unborn babes. A thousand quacks ply this hideous trade. Who does not recollect their advertisements in the newspapers ten years ago? What man did not receive their circulars? It was said of a great criminal lawyer that he "made it safe to murder." The ingenuity of these miscreants is exerted to made it safe to be unchaste. Once establish a belief in this immunity, and you open the floodgates of debauchery. But the violator of the laws of God and man pretty surely finds himself under the avenging lash; his victim, an outcast. No finer specimen of physical manhood than Professor —— has trod the aisles of —— College these many years; he stood among the students like a magnolia tree in spring, blooming and strong; but in a guilty hour he contracted the fatal poison and quickly sank into the dust, "hacked down, his thick summer leaves all faded." No fairer maiden than —— ever entered the village church in ——, but she died under the hands of Madame —— in the city to which her destroyer had enticed her. "Helpless, alone, in the cold and cheerless room, without friends, neglected, brutally murdered by a worse than murderess, — is it any wonder that this poor girl in her last agonies threw her fair arms around the neck of a godless coroner and besought him to pray for her?"[1]

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[1] *Frauds Exposed*, by Anthony Comstock, pages 417, 418.

Do good men and women in our large cities know how numerous all round them are the houses described in Holy Writ as "the way to hell, going down by the chambers of death"? Some streets are full of them. The New-England Society for the Suppression of Vice has just driven three out of the immediate presence of a home for hundreds of young women maintained by the Young Women's Christian Association of Boston.

Other phases there are, too disgusting to be mentioned in print, yet too common to go unnoticed. A distinguished physican of Massachusetts told the writer he had never known a boy to escape wholly. The race are less manly; they are physically, mentally, and morally lower, by reason of this universal scourge. The sins of the fathers are visited with terrible retribution upon the children through many generations.

No statement that can be made here will give the reader any idea of the depth of degradation to which poor human nature descends; but get the confidence of an old policeman, and he will whisper of doings in Paris, in New York, and in Boston that would have disgusted the dwellers in Sodom.

Against this tremendous evil there was specifically arrayed, for the first seventy-two years of this century, but one organization. A Society for the Suppression of Vice was established in London in 1802. Embarrassed for want of pecuniary means, it has yet labored incessantly and accomplished much. The following is quoted from its Seventy-sixth Annual Report in the year 1879:

> "Established in 1802, when the population of London was about 500,000, this Society has labored to the present year, when the population is upwards of 4,000,000, in the expurgation and prohibition of vitiated literature, and especially in the guardianship of schools against the introduction of books and reprints calculated to weaken intellect, blight affection, and, for all the noble purposes of life, to render the precepts and examples of schoolmaster and friend objects of private ridicule or disregard. In the course of fulfilling the duties of the Society, thousands of filthy pages of lascivious publications have been destroyed, thousands of disgusting pictures consigned to the flames. . . . . It has successfully suppressed various periodicals. . . . . *The Paul Pry*, *The Crim. Con. Gazette*, *The Women of London*, *The Wild Boys of London*, etc. . . . . The following summary of seizures and destructions since the year 1834 will speak for itself: [We quote but half the list.]
>
> 380,569 obscene prints, pictures, photographs, and negatives.
> 64,487 books and pamphlets, mostly illustrated with abominable engravings.
> 5 tons and upwards of letter-press of the same character in sheets.
> 24,436 sheets of obscene songs, etc.
> 6,933 cards, snuff-boxes, and other articles. 98 grossly-obscene models.
> 82 hundred-weight of type, including the stereotype of several entire works of the grossest immorality."

Such is the work of the London Society for the Suppression of Vice.

The same energetic movement in this country was begun ten years ago by one whom Providence seems to have raised up for the special emergency, — a man who has, probably been more virulently belied than any other living American, but whom the writer, having known him intimately, believes to be as pure, as discreet, as modest, as conscientious, and as heroic as any reformer that ever battled with a gigantic iniquity.

Anthony Comstock, the son of Thomas A. Comstock, was born in New Canaan, Conn., March 7, 1844. His mother, whose maiden name was Lockwood, died when he was ten years of age, leaving seven children. At fifteen he was sent away to the high school at New Britain, Conn.; but at the end of a year his father's circumstances made it necessary for his son to relinquish the thought of a higher education and to earn his living. In 1861 he was clerk in a grocery store in Winnipauk, Conn., where he remained till, in 1863, at the age of nineteen, he enlisted in the Seventeenth Regiment of Connecticut Infantry, taking the place of a brother who had been killed in the battle of Gettysburg. After two years of honorable service, he was mustered out with his regiment at New Haven. After another brief experience as clerk in a grocery store, he went to Lookout Mountain, to assist in superintending the repair of the buildings of the Lookout Mountain Educational Institute, originally erected as a hospital. Over-work brought on a severe illness, which compelled him to return to his native State. With restored health, but with exhausted funds, he sought the advice of Mr. LeGrand Lockwood, of Norwalk, Conn., who loaned him five dollars as a cash capital to start him in business in New York City! "I went to New York," he writes,[1] "praying God to get me something to do; and after a week's roaming about the city, I found a place as third porter under two Irishmen in a commission house! . . . . I said, 'If the place will not honor me, I will honor the place!'" Soon afterward he secured a position as stock-clerk in the jobbing-house of B. Spellman's Sons, Warren street, at five dollars a week, which was somehow made to pay all expenses of board, clothing, and lodging! "One of my employers went to Europe, and when he returned in the middle of June he raised my salary fifty per cent., dating it back to May 1st. I again overworked myself until July, when I was taken ill, and was absent two weeks. Returning in fear of dismissal, I was discharged and hired over again, as a city salesman, with an advance of about six dollars a week. Soon afterward I received a salary of $1000 a year." At the end of the next year he entered into the employ of Cochran, McLane & Co. It was in the two places last named that his attention was particularly directed to the ruinous effects of obscene publications. He determined to check the sale of them as far as possible, little dreaming of the career that was to open before him. The first offender that he arrested was a desperado, who afterward stabbed him at Newark, inflicting a wound that nearly cost him his life. "After I had made a few arrests it was revealed to me that there was an immense business of the foulest character systematically carried on through the mails. Its extent at first appalled me. The infamous character of the publications made me afraid to touch them, lest I might be brought under their terrible influence. The lessons learned at my mother's knee of prayer and trust in God were my only stay and comfort. Tremblingly I took up this work. At almost the first move I was met with an assault from the papers: my motives were attacked; I was told that, if I was the Christian I professed to be, I could find plenty of those places in Ann and Nassau streets. Following the advertisements in the first paper that attacked me, the *Sunday Mercury*, I made several arrests on the second of March, 1872. This was the signal for abuse all along the line. Then was presented to my notice the fact that one man published twenty-four different books; another, some sixteen or eighteen; another, one hundred and nine. I had no means. I appealed to the Young Men's Christian Association for help. At first I received no response; but providentially my letter fell under the eye of Morris K. Jessup. He did not send for me, but he came to me personally and invited me to his house; and before I left his house he gave me six hundred dollars to work with, and in part to reimburse me for money I had already expended." With this money Mr. Comstock was enabled to sieze over forty thousand dollars' worth of obscene plates and books.

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[1] The autographic quotations which follow are from a letter to the writer of this article, dated April 11, 1882.

But this business was making great demands upon his time. Some of his friends, too, thought him crazy, and attempted to dissuade him. "What can you expect to do?" they asked, "when the police authorities, whose duty it is to close up these places, cannot accomplish it?" A committee of the New York Y. M. C. A. finally took the subject in hand, and, in the last part of the year 1873, the New York Society for the Suppression of Vice was organized.

The work done by this Society has been vast, and it demonstrates how urgent was the need of its establishment. During the eight and one-half years preceding the first of January, 1882, Mr. Comstock had arrested five hundred and eighty-two offenders. Of these, twenty-seven were discharged by committing-magistrates, and nine by verdict of jury; nineteen absconded; the rest were convicted or pleaded guilty. Bail-bonds were forfeited to the amount of $50,900; fines were imposed to the amount of $63,931; imprisonment was imposed by the courts to the amount of 152 years, lacking seven days. The following table shows only a portion of the amount of vile stock confiscated:

Books and sheet stock seized and destroyed, - - - - -	27,584 lbs.
Obscene pictures and photographs, - - - - - - -	203,238
Microscopic pictures of indecent character, - - - - -	7,400
Negative plates for obscene photographs, - - - - -	1,700
Stereotype plates for printing the foulest books, - - -	14,495 lbs.
Articles for immoral use (too gross to be described), - -	64,836
Filthy playing-cards (semi-transparent, with shameful pictures),	6,122
Indecent Circulars, songs, poems, etc., - - - - -	1,376,939

In the prosecution of this work Mr. Comstock has traveled, outside of New York City, 173,992 miles.

Through his aid the New-England Society for the Suppression of Vice was established four years ago, with its headquarters at Boston. It has had, for the last four months, a permanent agent in the field, Mr. Henry Chase, of Watertown, Mass., whose office is at the Y. M. C. A. building, corner of Eliot and Tremont streets, Boston. This Society has rendered valuable service to the cause of purity in many ways, some of which we may name. It has secured the banishment of many indecent books and newspapers from railroad cars, depots, news offices, and other public places; it has in some measure restricted the sale of immodest pictures, prints, and photographs; it has largely purified the moral atmosphere of private places all over the State, by causing indecent language and drawings to be erased; it has procured the enactment of more efficient laws against obscenity, and has placed copies of those laws in the hands of many persons who were thought likly to violate them; it has secured the passage of a law that has operated most beneficially, authorizing justices or judges to exclude minors as spectators from courts during the trial of criminals; it has driven away houses of ill-fame from neighborhoods where their influence was specially destructive; it has stopped the sale of certain immoral books that were formerly to be found in almost every bookstore; and it has under consideration other important matters upon which it will act in due time. A similar society[1] has recently been established in Cincinnati, with branch societies at Cleveland, Detroit, Louisville, Chicago, and St. Louis, and with new branches established during 1881 at Peoria, Rock Island, Keokuk, and Toledo.

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[1] The Western Society for the Suppression of Vice; W. D. Breed, President.

Very effective work has been done hy Mr. Comstock within a year or two in suppressing lotteries and policy-gambling.

In fighting the desperate men engaged in the destruction of the purity of the young, Mr. Comstock incurs the greatest dangers. Innumerable have been the assaults upon his character, many those upon his life. The former are less and less annoying; for he long ago became accustomed to the sneers, insults, calumnies, and curses of the bad men who sympathize with vice, and to the innuendoes, slurs, and jests of the ignorant good men who shut their eyes and stop their ears and play the ostrich. The target of a thousand shafts of malice and low wit, no weak spot has been found in his armor. Doubtless he has made mistakes; but his private life is conceded to be irreproachable, and it is rare indeed that judges or juries fail to sustain his public acts. No man in England or America is so hated and feared by gamblers, smut-dealers, seducers, and the murderers of unborn infants. No man is better entitled to say, with Sir Galahad, —

"My good blade cleaves the casques of men,
My tough lance thrusteth sure,
My strength is as the strength of ten,
Because my heart is pure."

Against personal violence he seems to bear a charmed life. The stab inflicted by the villain at Newark has been mentioned. Comstock had arrested him, conveyed him to the jail, and was in the act of stepping down from the carriage to deliver him into the custody of the sheriff, when the assassin lifted a bowie-knife high over Comstock's head with the intention of plunging it down into the brain. Partly turned aside, the keen weapon descended with great violence through Comstock's cheek, laying it open in a ghastly wound. Covered with blood, the latter instantly drew a revolver and, refraining from firing, compelled submission; but for a week his life trembled in the balance. The writer saw him daily, as he lay with face so disfigured as to be unrecognizable, — incapable of speech, but perfectly calm. His religious faith sustained him. "The darker the cloud the more I pray God for strength and grace to do His will."[1]

At one time he had eight or ten offenders under arrest in Ludlow street jail. One of these, who claimed to be converted from the error of his ways, wrote to Comstock, informing him that a plot had been formed to assassinate him as soon as an opportunity should offer, and that one of their number, a powerful ex-pugilist, six feet four in height, had agreed to make the attack. Accordingly Comstock was not surprised when, one day, after leaving court, this gigantic villain approached him with savage threats. A police officer was near, and Comstock turned the prize-fighter over to him. The latter took him a few rods aside and released him. Immediately crossing City Hall Park, the monster came running after him and attacked him, expecting to find him entirely ignorant of "the manly art." But Comstock, though of no more than medium size, is a muscular Christian of a type very dangerous to the average shoulder-hitter. "It was given me," he devoutly writes, "to get a blow with my right hand between his eyes, partially stunning him; and, as his head went up, my left hand went under his chin, and threw him over the chain around the Park. . . . . He went down first, and I on top of him until I could get an officer and locked him up!"[1]

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[1] Letter to the writer, April 11, 1882.

A few weeks afterward, as Comstock was passing out of the United States Court, another rascal came behind him and spit on him. Turning to defend himself, he received a heavy blow from the villain's cane, cutting open his scalp and causing the blood to flow freely. "He then dropped the cane and lay down!" writes Comstock with grim humor.[1] [1] On three different occasions, an assassin who had been promised five hundred dollars if he would kill Comstock, drew a knife upon him. His first interview with this man is thus briefly described: "He came into this place where I am now writing and asked me if I was all alone. I said 'Yes.' 'Vell,' said he, 'I come in.' I said 'No.' 'Vell, are you alone?' 'Yes,' I replied. 'Vell, I come any way.' As he started, I covered him with my revolver, taking him over to the court. He was sent up for a year." These are but specimens of the assaults upon his life.

"I have in my office," he writes, "several hundred envelopes containing letters of the most violent character, proving true the old adage, 'Barking dogs never bite.' . . . . It was frequently threatened that they would come to my house at night in a crowd and mob me. And just here I may say that, if your brother-in-law and friends in New Haven knew the pleasure and comfort they have given me in the present they sent down to me,[2] they would not find it altogether in vain that they have given more than a cup of cold water to one who is earnestly seeking to serve his Master."

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[1] Comstock's letter of April 11, 1882.

[2] Mr. Comstock alludes to a sixteen-shooter Winchester repeating-rifle, presented to him in March, 1882, by Mr. Converse, President of the Winchester Repeating-arms Co.

Packages of nauseous and poisonous substances, virus of small-pox and of other dangerous diseases have repeatedly been sent to him.

We cannot better conclude this account than by quoting again from the same letter the following words of this modest yet determined and fearless man, whom Providence seems to have guided and spared: "

"Notwithstanding all, I am alive and well, and in good physical condition to combat still further the enemies of our beloved children. As I look back on the past few years, I think of the friends that have been raised up to this cause and the support we receive at the hands of good men, I cannot but feel that God's hand has been in our work."

SOME CAUSES OF FAILURE AMONG TEACHERS.

BY MISS MARY R. ALLING.

Last winter a young teacher wrote from the West, "I hate school-teaching." She started in her work with delight and enthusiasm, and, in two years, had reached this miserable reality. Since other teachers have had similar experiences, it may not be unprofitable for us to seek the cause of such changes.

A young woman begins school-teaching with an idea that it is an easy matter. She may have in mind the too common idea of people outside of the professoin, — that a teacher has no hard work to do, and has an enviable amount of leisure. Perhaps with a truer conception of a teacher's life, she does not realize how slow the process of growth really is, and how much labor and waiting are required to produce a good school. She remembers a teacher who made school-life a continual joy, not a mechanical routine; and, as in work well done the steps to perfection are hidden, this fine school-keeping seemed easy and natural.

She steps into her first school-room expecting to embody at once her ideal. She soon finds that her pupils do not yield to her the unquestioning faith and the respectful obedience which she and her mates gave to that wise teacher of her youth. This first stroke to her self-conscious power is hardly over, when she begins to feel the monotony of ceaseless repetition, the drudgery of examinations and reports, and the restrictions of the red-tape of our graded schools. The pressure of principal and superintendent to bring pupils to certain standards in scholarship worries her; and the frequent and vexatious exhibitions of moral depravity among her pupils gradually undermine her faith in a divine element in human nature. She may comfort herself by the reflection that these children are worse than others,—certainly worse than those of whom she was one under the teacher who never seemed tired nor discouraged. This last hope vanishes when another class passes into her hands, and the second year proves even harder than the first. Then she begins to blame herself; and, as is usual and natural, her self-judgments are as extravagant as her other estimates have been.

Another young woman accepts the work with the sense of it that a policeman has of his duties. She, too, remembers her school-days, and bases her conclusions upon them. She grew up under a police *régime*, among students who believed that to deceive a teacher was not only quite proper, but a great proof of ability. If this teacher has real fitness for the work she will gradually waken to the evil effects of such a school-life, and there will open before her conceptions of something more true and beautiful. Then will come no enviable struggle; for she will seem, at first, powerless to eradicate the false conceptions from the minds of her pupils and the false attitude toward them which from habit she unconsciously assumes.

Another woman enters upon the work with no conception of it. The nature, scope, and responsibilities of it have not entered as factors in determining her choice; and to all of these issues she is indifferent. This teacher is at the mercy of chance and caprice; and the probabilities are that she will drift from indifference to dislike.

Next to these false conceptions of the work of teaching comes, as cause of failure, the condition of the children in our public schools. The children come from the hovel and the well-kept house; they have all grades of ability from incipient idiocy to the keen intelligence that comes from cultured ancestors and wise home-training; and they exhibit all phases of fineness from the outgrowth of daily familiarity with the rude and vulgar to that inbred delicacy which no outer touch can mar. One surprises the teacher with an utter lack of moral sense, another with a singleness and purity of purpose that puts his own to the blush. One is at school as the result of unaided effort to be there, another is brought by reluctant parents in obedience to a compulsory school-law. One believes study a fashionable and proper thing, but irksome; another, having drawn in the love of learning with every breath from baby-days, throws himself into the work with an eager abandon that the teacher often needs to restrain. One finds encouragement for all his pranks from parents who are constantly telling of their misdemeanors at school as though worthy of special commendation; another is sternly told that if punished at school he will be doubly punished at home: and between this license and this tyranny the children show every variety of behavior.

To blame parents for these perplexing conditions is useless. We might as well blame the Power that set in motion the forces which have produced humanity with its manifold variety. That parents are directly responsible for much that troubles a teacher is true; but no amount of speculation as to how these disheartening results might have been avoided will better the matter. The teacher must take the children as he finds them. He is not responsible for what they are when they come to him, but he should look well to what they are when they leave him. The results of his efforts to create harmony among such discordant elements, to repress one tendency and develop another, may,—nay, often does,—depend upon his appreciation of this variety. One method of treatment will bring success in one case and worse than failure in another. Many of the perplexities of government over which young teachers spend hours of anxious thought might be removed by a friendly call at the house of the offenders. Our conceptions of a pupil are more or less at fault until we know the environment from which the child has grown.

A third and frequent cause of failure is the lack of professional training. Much has been written and spoken about the need of special preparation for the work of teaching, the many normal schools have put it within the reach of every teacher, and educational papers strive to keep up the interest in the work; yet the majority of those in the actual ranks of the profession dismiss the subject with contempt or indifference. Many graduates of our colleges speak somewhat pompously of the benefits of such training to people of meagre education; but feel insulted at the suggestion of their own need of it. Just here lies one of the mistakes of our superintendents and school-committee men; they choose their head teachers more often for scholarship than for real teaching-power. Criticism of grammar-masters and teachers in high schools are often met with, "But he is a scholarly man: He graduated —" and then follows an account of rank and honors at graduation from one of our best colleges. Does a general course at college necessarily make a successful lawyer? an acceptable preacher? or a reliable physician? No more does it insure an excellent teacher. If the principals, masters, and head-assistants are beyond the need of professional study, the teachers under them are not likely to feel such need in opposition to their influence; and, if these teachers do seek it, or, having had it, try to do more scientific teaching, restriction and ridicule may come instead of the necessary freedom and encouragement.

People object to professional training, not from malice or insincerity, but from a false conception of teaching. To find whether the pupil can repeat the subject-matter of a given text-book, can solve according to stated rules various mathematical problems; in short, can perform with dexterity certain mechanical mental movements, exhibiting most of all a ready memory,—this the master thinks is his work. He tells you he received such training, and asks what more the children need. Perhaps he has tried the new methods, and declares that he has proved their foolishness. Does not this very attitude of his show the narrowing effects of his training and his conceited conceptions of the past? There is something radically wrong in the education of any man who has no determination to improve the methods of his father, or the mode of life under which he grew.

To meet all objections to professional training it is necessary to answer the question, What does education mean? To lead out, not to pour in; to enlarge by natural growth from within, not by layers of foreign material from without; to produce a soul, not a machine; an active original, not a passive copy,—this is the work of education. An educated man should be acquainted with himself, his forces and tendencies; and such acquaintance is rarely effected by the common habits of text-book study. He should be master of all the outgoes of his being, able to use and to restrain at pleasure; and such power and self-control are not developed by the mechanical and unreasoning government existing in most schools. He should have clear insight, be not easily deceived; and if he has not learned to observe and think for himself, this will be impossible. He should reason without dimness or confusion; but without clear insight and trained habits he cannot avoid the common muddiness of intellectual processes. Last, but not least, he should be able to express the results of his observation and thought so effectively that his meaning cannot be mistaken. Appeal to your experience. Does the work of an untrained teacher usually produce results that approximate to these? Many a teacher who grows more and more disheartened each year might have been a light to his associates had he been trained for his work.

The greatest cause of failure is yet to be named. A true conception of the work, a knowledge of the varying characteristics of the children, the use of improved methods,—all may be powerless to produce success without that combination of spiritual qualities which fits one to stand as a moral guide before little children. It is not too much to say that the teacher is the school. Mr. Bagehot pertinently says, "Out of nothing, nothing can be created." If there is little comeliness in a teacher, there will be little in his school. The general atmosphere of any school is an index of the character of its teachers. Teachers often express regret at the petty deceit that meets them at every turn. If this is common in any school, some teacher is to blame for it. A youth once stated to us that he deliberately cheated in the work under ever teacher save one in a normal school, and of her he said, "I cannot cheat at Miss ———'s examinations; she is so truthful and trusts us so." Students may not always be able to give reasons why they are truthful to one teacher and have no scruples at deceiving another; but, one and all, they are affected by the atmosphere which the teacher carries. Words here count for little; deeds and looks are false or true, according to the inner life. If there is in the innermost soul a willingness, or even a reluctant permission, to be untrue in any direction, that will impress the school; and the deceit that a teacher regrets in his pupils will be but a reflection of his own falsity. Nothing but absolute truthfulness in him will produce that condition of mind before which pupils will put away falsehood and strive to be true. This suggests a silly error of teachers,—the supposition that pupils should think them infallible. A bright child asks a question that a gray-haired philosopher would be cautious in answering; yet a teacher of limited learning and less sincerity gives a glib reply to keep the child from doubting his scholarship. He wishes the pupil to think that all knowledge worth having has been attained in a few years by one person, namely, himself. Between devotion to text-books and the careless dogmatism of such teachers, children leave our schools with the conceit that they have compassed the universe and settled all the problems of existence. A young teacher once followed an older one of this infallible type. During the first week, a bright boy propounded a question to which she quietly answered, "I do not know, but I think you will find it in ———," naming a book. The class looked surprised. From that day several of the students threw test-questions at her on all occasions, to about half of which she simply replied, "I do not know." Contempt for her began to grow; but, meanwhile, she had interested them in her daily class-work, and gradually they forgot to ask her puzzling questions. Before she had been there a year, it was reported about town, in their Western phrase, "The scholars all swear by Miss ——." The pupils would accept no statement that varied from what she had told them, without careful investigation; and, when such investigation had proved her mistaken, the pupils carried the knowledge to her with joy, knowing that she would sincerely thank them for correcting her. Compare the results of the two kinds of work,—results to the character of the teacher, and the development of the pupil. If a teacher is to be so truthful, it follows that he must be unexceptionable in character, and well prepared in scholarship. Purity, refinement, tenderness, humility, never-ceasing thoughtfulness for others,—these must be inwoven into the very texture of his nature. Above all, he must be these and everything through love. Indifference and dislike in him will never create loving enthusiasm in his pupils. A man or woman out of whose soul the childhood has departed; who has no active delight in life, no spontaneous affection for beauty and truth, no creative longing to transform some part of the waste, weed-filled world to beautiful garden-ground, no quick willingness to toil long and hard to produce such a transformation, no abiding faith in the final outcome of good,—such an one has no right to teach. From his work little of permanent value can come.

Suppose a teacher from any cause has reached the conviction that her work is a failure, what shall she do? She may leave the work and seek other employment, which settlement of the difficulty is certainly safe for the schools, but may not be for the teacher. She will never find an occupation free from vexation, drudgery, and discouragement; in none will she escape contact with that same moral depravity which threatens to destroy her faith in human nature; in none will she find commonplace work less thankless and wearisome, and perfection more enjoyable and satisfactory. She may give up her ideal and be content to keep order by force of will, and to mechanically bring her pupils up to the standards in scholarship, she, herself, growing a little more cynical, dogmatic, and unlovely every term. Such a decision is equally hurtful to teacher and pupils. The whole aim of education is ignored in work done in this way. To keep a restless child quiet by force of your will is not to teach him self-control, without which he becomes a dangerous, not a useful citizen. To fasten facts in a child's mind by mechanical repetitions is to make him at most a well-adjusted machine, incapable of independent work. This forced order and mechanical teaching, which necessarily go together, make impossible the drawing forth of those delicate and beautiful sentiments which make the world a wonder, study a delight, and life a thing divine.

The third and only other way to settle the difficult question is to find out the causes of failure and remove them. A true conception of the work, a knowledge of the condition and needs of the pupils, the necessary professional training, the essential elements of character,—all these are within the reach of every teacher who has the heroism, humility, and faith out of which good teachers are made. The envied height may seem far off and inaccessible; bnt there are teachers on it, and not one of them reached it without persistent effort, whole-souled devotion, and unflinching self-sacrifice. When a teacher has decided to follow this last and noblest way to success, she may be helped by avoiding other sources of failure.

In this part of our paper, we must speak more particularly of certain conditions of life that concern women alone, and draw some comparison between the sexes in our professional life. Our apology for this is found in the fact that four-fifths of our teachers are women.

Notwithstanding the limited hours spent in schools and the long vacations for which some people envy teachers, many of them wear out fast. Women who follow the profession for life often break down physically or mentally, or settle into a condition of inactivity before they reach the years which, by all laws of natural growth, should be those of greatest vigor and usefulness. Before determining how much of this is due to the profession, we must look at women outside its ranks.

A woman who has greater vigor after thirty-five than before, is everywhere the exception, while the opposite is true of men. The reasons for this early decay must be sought in the restrictions under which a woman develops, and the narrowing and belittling effects of much of her life. From the latter a teacher may be exempt, but from the former she suffers equally with other women. Her dress, exercise, occupation, and habits of thought differ from those of men during the first twenty years of her life, and after that few new habits are formed. If, then, the two sexes enter the profession together, the probabilities are that by the time the man has begun to do his best work the woman has become unfit for service. If they could start alike, would there be no difference as the years pass? This leads us to the question of the effects of professional life on the two; and, even here, we cannot ignore the difference existing at the start. If the two seem to start with equal powers, the man, under an equal strain, wears out less fast. What is the cause? In seeking to answer this question, we should put aside the too common idea of a natural difference between the two. Among savage tribes the woman, everywhere, equals the man in physical endurance; and we have but to look at the peasant women of Europe to-day to almost prove her physical superiority to man, for they not only bear the cares of maternity and housekeeping, but do an amount of farm-work equal to that of many of the men with whom they labor. Some differences of frame, less weight of muscle, inferior stature she has; but among men mere size is no index of power, either physical or mental. History and physiology both show that woman started in nature no whit inferior to man in power of endurance. Then, if she break down sooner than he does, the causes for it must be sought in the conditions of life.

The same energy cannot be used in two directions. Physiologists tell us that when the body is exposed to cold, much energy is expended in creating heat to keep up the normal temperature. If this exposure is oft repeated, much vital energy is thus spent, all of which might be saved by added clothing. We have but to compare the dress of men and women for warmth, to readily see how much real working force women unconsciously waste in keeping warm. It is useless for women to resist this idea with the statement that they are warm enough, that more clothing would be uncomfortable. The body is subject to habit. If you have laid on it the necessity of creating extra heat, it will do it; but, as soon as you remove that necessity, it will show an increase of energy. This waste of a woman's life-force begins at the cradle, and ceases, usually, only at the grave. The moment a woman is convinced of the truth of it, that moment she becomes responsible for further waste; and, if she allows it to go on, she squanders her patrimony. Another thing which drains the energy of woman is the adjustment of clothing that impedes the normal activities of the body, and hangs weights where nature has made no provision for them. These two methods of wasting energy are about the only differences between the lives of men and women, for which women alone are responsible. A woman usually takes care of her room, although she pays as much for board as does a man, from whom no such personal service is demanded,—a social injustice. A woman makes most of her garments, spending hours at sewing that a man gives to exercise, recreation, and reading. In summer vacation, a woman assumes household cares to relieve the overworked mother, while the man goes off on some delightful excursion, plays a little at farming, hunts, angles, and swings in a hammock. He stores up energy every day of the long summer; she uses all she makes, counting herself fortunate if she does not draw on the principal. Of these calls on her time and energy, a woman could avoid one-fifth,—that spent at unnecessary sewing, trimming and fancy work. The other four-fifths are caused by her small salary. Think you a woman who receives six hundred dollars and does all this would not hire most of it done and rest, as does her associate of the other sex, if like him she received twice as much? Is it any wonder that, with this great consumption of life-force outside of her profession, a woman constantly draws on the capital nature intended for future years, and becomes bankrupt before a man reaches his prime? Is it not rather a wonder that she lasts as long as she does? If a man should spend every available hour at some other task in addition to his regular professional work, his friends would unhesitatingly prophecy a breakdown in the near future.

One source of harm to all teachers is the air they breathe. Shut up in our ill-ventilated school-rooms, breathing many times over, not only the air that has brought out the refuse from his own lungs, but that from fifty others in all stages of health, is it a marvel that at night he is tired and cross, and complains of headache? This evil can be lessened by care in opening windows and doors at recess; but it can be removed only by new buildings with apparatus for constantly changing the air. However, teachers can see that in their homes they breathe no refuse, and that they spend one hour each day in the pure air out-of-doors. "I have no time for the out-of-doors," do you say? Dismiss your pupils promptly at four, delinquents and all,—they need it as much as you,—and spend the time from four to five in a brisk walk in sun and air. The government will be easier on the morrow because of the clearness of thought which the fresh air will give. The best possible preparation for brain-labor is red, oxygenated blood, which can be produced only in pure air. Also, a healthy brain depends upon a healthy body, and that is impossible without a proper amount of exercise. Besides the need of these changes in the life of a teacher, his food demands attention. Scientists know so little about the permanent effects of different foods that it is quite impossible to say what should be rejected. The thing which every person who wishes to make the best use of his life must do is to watch the effects of the various foods on himself and others, and refrain from using that which seems harmful. We cannot afford, for the sake of a momentary gratification, to force the body to use its energy in disposing of waste material, or in overcoming the bad effects of that which is injurious. Our teachers sleep too little and not regularly, and their general habits often exhaust force, not add to it. Yet when all of these objections are removed, there remains the great sin of teachers,—over-work.

We hear much said about the selfishness of mankind, and few doubt that there is much of it; but if teachers used a little more of it in their professional work, both teachers and pupils would fare better. Teachers are so eager to give pupils all that can possibly be learned, that both are overworked. A little less would give time for assimilation and natural growth to the pupil, and years of life to the teacher. There are teachers who shirk at every task and who never produce a piece of perfect work; but there are also teachers who are constantly trying to force intellectual growth at the expense of physical development, or to produce the ultimate results of culture on a superficial basis. The courses of study are at fault here; but with them as they are, a teacher may select the work so as to save the pupils from much forcing and himself from worry. To the never-satisfied teacher we urgently say, Be willing to do less now, that you may do more ten years hence. Save yourself for the children yet to come.

One of the best antidotes to overwork is recreation. A stated time each day should be devoted to something which is as far removed as possible from the regular work, which is a complete change and exciting enough to fasten the whole attention, in which self and cares may be forgotten. Some of these overworked teachers, especially women, think that if a half-hour is left from school-work, it must be spent at solid reading; so the tired brain sets itself to digest the last work in science, history, or metaphysics. To enjoy such reading, a false excitement must be created. Swinging ten-pound dumb-bells would not rest arms already tired with the use of a five-pound pair. This reading of the tired teacher is not more sensible. One teacher whose work was heavy spent an hour after tea, each day, in a wild romp with two bright children, getting something besides rest,—a knowledge of little children, and an awakening of that active delight in simple pleasures which many of us early lose. Another spent hours with dog and gun; another, a teacher of Latin and Greek, took botany for recreation, and long walks in search of plants brought him the needed change. Wholesome recreation may be found in so many and so varied directions that every teacher may find something to suit his individual taste and need.

The teacher with whose expression of hatred for teaching this paper began, wrote in the same letter, "I am tired;" and also, "I never worked so hard in my life, and never was so constantly discouraged." We have tried to indicate how much weariness and overwork may be avoided; but there remains to be pointed out the connection between the two statements, "I hate teaching" and "I am tired." Each may be the outgrowth of the other; but since few teachers begin tired, and most of them soon become so, the dislike is more often the outgrowth of the tiredness that is never wholly rested than from any inherent unfitness for the work. Work that is so constant and monotonous as to leave no time for change and variety soon becomes hateful to any one; and teachers should have change and variety, not once a year, but every day; else the drudgery and monotony will crowd out that love for the work which alone insures excellence in it. Not only should love for the work be kept active and growing, but hopefulness also. So subtilely are we woven together that body and mind constantly react. A continued discouragement will actually stop the normal functions of the body, and through these those of the mind. A teacher should fight hatred and discouragement to the death, and seek love and hopefulness with his whole strength. That "pain is death: joy is life," is true in all departments of effort. This same teacher adds, "My disposition is soured, and is becoming more so every day." This natural result of overwork and discouragement is so common an outgrowth of a teacher's life that people outside the profession name it as a reproach. It has been said in our hearing, "No woman can teach ten years without becoming disagreeable, no matter how lovely she was at the beginning; she grows dogmatic, cynical, harsh, angular, conceited each year." To this sweeping statement, we can all name notable exceptions; but are they not, after all, exceptions? The teachers who retain their early beauty of manners are, without doubt, becoming more numerous each year; but the outside world sees yet many among us who merit these stinging criticisms.

Beyond all the causes thus far considered which warp and destroy our teachers, this graciousness of soul and manner is mainly lost through another channel. A young woman acccepts with reluctance the fact that she must earn her bread; but, since she cannot get rid of the evil, she chooses what she considers the most respectable occupation within her reach,—teaching. If she numbers among her friends young ladies who live in idle wealth, she holds this "most respectable occupation" as little removed from disgrace. So she shuns the subject, her associate teachers, educational journals, and whatever suggests her labor. A young man enters the profession to get a little ready money to set him up in business, to finish an education for the ministry, or for support while he establishes himself at law or medicine; and, regarding the work as a mere stepping-stone to something he fancies is better, he holds it lightly, and not only has no professional feeling himself, but an unhesitating contempt for those who have. These cases are extreme ones; but they illustrate a feeling that is wide-spread among teachers, and passes from these extremes through all degrees to that existing in the mind of a teacher who, really loving the work, covers that love with a half-shame.

Think you a minister would succeed who held his work to be ignoble? a lawyer who gave his a half-hearted devotion? a merchant who tried to shield his from the eyes of his friends? Out of such a feeling for teaching can any joyous work come? And if, with this feeling, one remain long in the profession, can he help growing cynical and unlovely? In this foolish vanity the teacher not only saps the foundations of his own graciousness and nobleness, but he defrauds every child in his presence. If a teacher will study his work and its results, he will become willing to sacrifice his former prejudices and former friends, if need be, to a work before which the noblest might well shrink in unworthiness, and he will become proud and glad to be a teacher.

The future of the commonwealth depends upon the teacher; he molds the men and women of the future. What teachers are to their profession, that it will be; what it is, that will the youth of our land become; and what they become, determines the whole future of the state, — nay, more, of all states, of eternity itself. Whatever our religious tenets, we must believe in an immortality of influence; and the forces that teachers set at work to-day in their pupils will cease to act only when soul ceases to impress soul.

HON. WM. A. COURTENAY, CHARLESTON, S. C.

We present with this issue a likeness of Mayor William A. Courtenay, of Charleston, S. C. He was born in that city on February 4, 1831, and at the age of 14 went into business with a very limited education. In the period between 1850 and 1860 he conducted, with his brother, an extensive and very successful publishing and book-selling business in Charleston, and eagerly availed himself of the opportunity for reading which his surroundings afforded. He here formed the acquaintance of many of the leading professional and literary men of that cultured community, and profited greatly by his intercourse with them. It was remarked at that time that he associated mainly with men older than himself. In the spring of 1860 he was invited to assume the business management of the Charleston *Mercury*, and on October 1 entered upon these duties. In a few weeks his ability as an organizer and manager made itself felt, and the business affairs of the paper were administered with the most satisfactory results to the proprietors. While here employed, the great fire of December, 1861, swept through the city. Although without previous training or experience, he undertook to report this disastrous conflagration in great detail. Beginning on Cooper River at the foot of Hasel street, where the fire originated, he followed its course on foot to Ashley River on the southwest, and in a report, embracing ten or twelve columns of the *Mercury*, he gave the boundaries of the fire, the names of the owners and occupants of houses, names of streets and numbers of the houses, and brief descriptions of churches, buildings, and noted residences destroyed. This was the only account of the calamity published in Charleston on so complete a scale, and attracted considerable attention at the time. Although not connected with the editorial staff, he was a frequent contributor to the paper, and improved himself very much as a writer by this privilege. At the close of 1861 he left the *Mercury* and entered the Confederate army, where he served until its surrender in 1865.

After the war, Mayor Courtenay, like the rest of the men of the South, found himself in poverty. As former employments were not yet possible, his first work was to drive a wagon for freight through the desolated region between Newbury and Orangeburg, S. C., a distance of eighty miles. The railroads having been destroyed, this was the only transportation possible for many months. From this beginning he established, while residing at Newbury, an extensive and profitable forwarding business. When the railroads were rebuilt these profits of course disappeared, and in the spring of 1866 he returned to Charleston, where he soon became the manager of steamship lines from that port to New York and Philadelphia, and still continues to hold that position. While a democrat in politics, Mayor Courtenay has been distinguished by the liberality of his views, and as Captain of the

Washington Light Infantry he was greatly instrumental in the acceptance of invitations which resulted in the presence of that historic corps at the centennial celebrations at Bunker Hill and Philadelphia, an exchange of military courtesy which was productive of the kindliest feelings.

No Southern city suffered more than Charleston during the war. Fires were frequent; shot and shell had done their ravaging work; fifty millions of real and personal property had sunk to less than twenty millions. The subsequent rule of the military and the ignorant had further unsettled public and private affairs; the city debt had greatly increased. As late as 1879 grave apprehensions were expressed as to city affairs. In the municipal election occurring that year, for a term of four years, strenuous effort was made to secure a strong business administration. Mr. Courtenay was selected to make this laborious canvass, which continued six months, and resulted in his election, with an excellent Board of Aldermen. Since then great changes have taken place. City securities have advanced fifty per cent. The debt has been materially reduced. Business is conducted in all departments on strictly mercantile principles. Miles of stone roadway have been laid; real estate values show a marked advance. The annual average cost of the city government, from 1870–1879, was $800,000, while since 1879 it has been $650,000.

In addition to these beneficial reforms, what has most distinguished Mayor Courtenay since his entrance upon his administration has been the active interest he has displayed in the cause of education. Before the war, owing to the social condition of the South where no large middle class existed, and the leading portion of the community were able to give their children the costliest advantages, the common school system was neither well understood nor generally established. To this general rule Charleston has always been a notable exception, and has been distinguished from the earliest times by its enlightened and liberal policy in all matters that concern education. As long ago as 1811, when the General Assembly of South Carolina passed an act authorizing the establishment of public schools, the allotment to Charleston was a fund of $5,100 and five teachers. In 1880 the fund had grown to $62,000, and the number of teachers to ninety-one, and in that year the white pupils attending these schools numbered 2,079 and the colored 2,069. In 1860 the number of white children in the public schools was about 4,000, so that by the addition of the colored population, although the number of possible school-children has doubled, the number of children attending the schools has remained the same. The five public schools, crowded as they are by the present attendance, do not afford accommodations for more than half the school population of the city. This fact exists in spite of the large fund above mentioned, 40 per cent. of which is annually collected by a voluntary extra tax on city property to supplement the constitutional State tax of two mills. Charleston, in a word, is taxed for purposes of education more than half as much again as Boston, a city the reputation of whose schools is world-wide; and although the colored population pay but a very small percentage of this taxation, their schools receive over 50 per cent. of the fund expended on education.

These interesting facts we derive from Mayor Courtenay's annual report of 1879–1880. Devoting a large space to the consideration of education in Charleston, he gives a most exhaustive review of the history and present condition in that city, depicts the sacrifices which are being made by a population impoverished by war and bad government, and closes with a series of masterly arguments and an eloquent appeal in favor of national aid to the public school system at the South. In the latter connection he gives especial consideration to the problem of the education of the colored population, "who," he says, "constitute an exceptional class of our population. They had no opportunity of obtaining education and acquiring property. They are not responsible for their ignorance. They have had no teachers, and their parents were as ignorant as themselves. They are, therefore, necessarily incompetent to exercise with discretion the elective franchise. Justice to them requires that they should be given that education which alone can make them responsible citizens in their duties to others and in protecting their own rights."

Not only do the views of Mayor Courtenay extend to the establishment of a sufficient number of public schools for the needs of the population, white and black, but it is also his aim that the scope of usefulness of those schools be considerably enlarged. He does not believe in the theory that the obligations of the State to the public schools is fully discharged by teaching the rudiments of reading, writing, and arithmetic. Attention should be paid to the physical as well as the mental training of the pupils. As the public school is not only the nursery for the professional and business man, but also for the artisan and mechanic, trained muscles and a quick eye, as well as reading, writing, and arithmetic, constitute the capital of a part of the pupils. He is, therefore, a strong advocate of a system of manual training in the public schools, in order that "(1) Pupils may be prepared to earn a living more quickly and more readily upon leaving the public schools: (2) that the dignity and importance of manual labor may be appreciated more highly, since pupils will learn that study and preparation are essential to proficiency in the trades; (3) that training of the body may not be neglected while the intellect is developed."

But the energies of Mayor Courtenay have not been directed merely to the improvement and enlargement of the common school system, but also to the establishment and advancement of those great facilities for higher education which Charleston possesses. The high school, founded in 1839 as a training school preparatory to a business or collegiate life, receives from the city $4,000, and has a total income of about $11,000. During Mayor Courtenay's administration this school has been removed to a commodious building, with over an acre of ground, in the central section of the city, and the course of study entirely remodeled and reorganized. He has aptly illustrated his faith in physical culture by establishing a gymnasium, a model structure in size and ventilation, and equipped with the latest apparatus for exercise. In charge of an excellent instructor, its influence on the school has been marked by the happiest results. To receive the pupil who may desire a liberal education, after his course at the high school is finished, the College of Charleston stands ready. This institution has at present the entire income of $300,000 applicable to its support, occupies an entire square, with extensive buildings, a valuable museum of natural history, and a library.

Before the war one of the most distinguished educational institutions at the South was the State Military Academy of South Carolina. Established in 1842 and closed in 1865 by the necessity of the times, during the twenty-three years of its history it was celebrated for the thoroughness of its training and the high character and extended influence of its graduates. Since the close of the war the buildings have been in the possession of the United States Government. For several years past Mayor Courtenay has been among the most active and effective workers for the reëstablishment of this great academy. Even before his election, at his suggestion as Captain, the Washington Light Infantry dedicated the 22d of February, 1879, to the presentation, through their orator, of this institution to the favorable consideration of the Legislature and people. As a result of these and other efforts the academy will reopen in Charleston on the 1st of October with one hundred and fifty cadets from all parts of South Carolina. The course of study as nearly as possible resembles that of West Point, is highly scientific and technical, with modern languages in addition. It is a significant fact that the orator of the Washington Light Infantry anniversary of 1879, the State Superintendent of Education, in a little more than three years afterward, is unanimously nominated for Governor of South Carolina with a popular enthusiasm throughout the State which heralds his certain election.

Mayor Courtenay's annual report of education of 1879–1880 is well supplemented by that of 1880–1881. The former is devoted to the public schools, while the latter discusses the advantages of Charleston for higher education, the importance of physical training in education, and appeals for the generous establishment of scholarships and foundations to confer a "blessing on hundreds of boys who might otherwise grow up neglected in their preparations for the duties of life." The two reports are a revelation in themselves to any one interested in education at the South. With the conspicuous advantages enjoyed by Charleston, as set forth in the report of 1880–1881, there is still wanting that unity of administration which can alone assure the full measure of success. To establish a system of school government which shall include the public schools, the high school, the college, and the military institute, Mayor Courtenay is taking active measures, and, supported as he is by influential citizens, will doubtless accomplish it. An important step has been taken in this direction by the appointment of Mr. Shepherd, for many years Superintendent of Education of Baltimore, to the presidency of the College of Charleston; and by making this office include the supervisorship of the high school of Charleston, where a complete unification of school government is established, it is the hope and ambition of Mayor Courtenay that, with her institutions of learning on a sound financial basis, and under the supervision of one body, with able instructors and numerous pupils, Charleston may rise to the dignity of an educational centre, and attract to her schools not only the youth of South Carolina, but many from beyond the limits of the State.

We give this sketch, — although short and imperfect, — because we feel the greatest gratification that in a portion of the South, at least, such good work is being done in the cause of education, and because the Mayor of Charleston is the only municipal executive we know whose highest ambition is in such a cause. He has clearly seen that the salvation of the South must result from the general education of the masses by the common school system, and that home facilities for higher education are doubly valuable because training to the mind is afforded without sending the boy to other cities, where he loses the association of his family and misses a part of his life education which nothing can supply; nor can we better express our appreciation of him or his work than by quoting his own eloquent words: "May the day soon come when, in response to so earnest solicitation and so grave warning from men who represent the conscience and wisdom of this people, every child in the city and State and throughout the whole South can find an entrance into the school-house, where alone he may be made a freeman and worthy of the trusts and capable of the duties of American citizenship."

EDITORIAL.

The Bureau of Education at Washington, D. C., is an institution which deserves support and encouragement from all patriotic citizens of the United States; it does a work for the people which no other institution of our government does. Since educators have been able to obtain statistics from the Bureau, the science of education has taken an impetus which did not belong to it before. The State governments do not collect educational statistics in such a manner that they serve teachers in general, and the Bureau fills this gap in the line of study. The joint associations at Saratoga voted to urge Congress to appropriate an increased sum to the Bureau in order to enable it to serve the country more fully than it has done heretofore.

The National Educational Association and the American Institute of Instruction held their annual sessions at Saratoga, N. Y., on alternate days, July 14–18, 1882. The sessions were characterized by certain marks of progress which deserve mention: (1) The membership was large; (2) The educators represented the most enlightened and progressive professional thought of all portions of the United States; (3) The spirit which actuated the proceedings was in the highest sense national in its sympathies; (4) The members were exceptionally thoughtful in their attitude toward their profession; (5) The drift of sentiment was toward improvements in theories and practices in the public schools of the several States; (6) The papers submitted were both elaborate in details and comprehensive in scope in their treatment of themes; (7) The subjects introduced were those which concern most intimately the issues of the present day in educational matters.

Hon. G. J. Orr, of Georgia, won high honor as president of the National Educational Association. His inaugural address was a powerful appeal to the whole country for better public schools; he particularized in comprehensive propositions the province of public schools and their relation to the welfare of the State. His courtly dignity in the chair of the presiding officer commanded the admiration of all who attended the sessions; his affability gained for him the esteem of all persons; and his broad and generous sympathy toward all the interests which were represented in the Association obtained the love of every patriotic heart that was present.

Dr. Wm. A. Mowry, of Rhode Island, will be remembered long for his skill as presiding officer of the American Institute of Instruction. His opening address was written for the latitude of the United States, and for the longitude of New England; he lauded the men of his States, as well he could,—they deserve it; he praised the commercial enterprise of New England, as well he could,—it is worthy of praise; he spoke well of the schools of New England, as well he could,—they are located on circumferences of which Boston is the center. Dr. Mowry possesses the rare gift of that accomplishment which is known as the melody of speech; he administered the duties of his office with great dignity and affability.

An examination of the programs of the various State teachers' associations impress one with the evident tendency of the times in regard to teaching. There is a disposition to study for facts of experience with that patient toil which is the hope of the fraternity; empiricism is not so high in the market as it was a few years since; extended experience is sought under scientific modes; inductions are allowed to demonstrate the truth that the most practical thing in existence is a sound theory. Mr. Grove, in an address given at St. Mary's Hospital, forcibly expresses the same opinion; he says: "If there be one species of cant more detestable than another, it is that which eulogizes what is called the *practical man* as contra-distinguished from the *scientific.* If by practical man is meant one who, having a mind well stored with scientific and general information, has his knowledge chastened and his theoretic temerity subdued by varied experience, nothing can be better; but if, as is commonly meant by the phrase, a practical man means one whose knowledge is only derived from habit or traditional system, such a man has no resource to meet unusual circumstances; such a man has no plasticity; he kills a man according to rule, and consoles himself, like Molière's doctor, by the reflection that a dead man is only a dead man, but that a deviation from received practice is an injury to the whole profession." Oliver Wendell Holmes says, "All economical and practical wisdom is an extension or variation of the following arithmetical formula: $2 + 2 = 4$. Every philosophical proposition has the more general character of the expression, $a + b = c$. We are merely operatives, empirics, and egotists, until we begin to think in letters instead of figures."

THE NATIONAL COUNCIL OF EDUCATION.

The Council held its second annual meeting at Saratoga, N.Y., July 6–14, 1882. The first meeting after the organization was held at Atlanta, Ga., in 1881, but owing to incompleteness in organization the work done at that session was partial when it is compared with that which was accomplished at Saratoga. The president of the Council, Dr. T. W. Bicknell, of Boston, had labored during the year faithfully and effectually to insure the success which crowned the meeting in 1882; he was reëlected president for the ensuing year. The membership comprises fifty-one eminent men and women who belong to the National Educational Association. The Council prepares, through committees, work for its meetings. The subject which is assumed by a committee is divided and the portions assigned to sub-committees, which treat the matter elaborately and exhaustively, although with sententious brevity in the form of propositions. After the committee has agreed formally upon its report, the subject is ready to be given to the Council; the report is read here without interruption; after the first reading, the second is begun; the first proposition is read and then the Council proceeds to discuss it without fear or favor, the one purpose being to arrive at truth, and truth alone; the proposition is then adopted, without amendments or with them; the second proposition of the report is read and discussed, and similarly to the end; thus the report of the committee becomes the formal and authoritative opinion of the Council. The meetings afford ample time to examine propositions; the membership is so limited that all have opportunity to participate in the proceedings, by which means the subject is viewed from all points; the educators who investigate the subject are the profoundest in the National Association; hence the *dicta* of the Council are the wisdom of the times in practical pedagogy. Reports were made on University and College Education, Dr. Israel W. Andrews, Marietta, Ohio, chairman of the committee; on High Schools, Dr. Wm. A. Mowry, Providence, R. I., chairman; on Chairs of Pedagogics in Colleges and Universities, Dr. Wm. T. Harris, Concord, Mass., chairman; on Education of Girls, Prof. H. S. Tarbell, Indianapolis, Ind., chairman; on Elementary Education, Hon. J. W. Dickinson, Boston, Mass., chairman. Drs. Harris, Hager, and Mowry were a committee to formulate the purposes of the Council. The report was adopted and made the preamble to the Constitution; it says:

"The National Council of Education shall have for its object the consideration and discussion of educational questions of general interest and public importance, and the presentation, through printed reports, of the substance of the discussions and the conclusions formulated. It shall be its object to reach and disseminate correct thinking on educational questions; and for this purpose it shall be the aim of the Council, in conducting its discussions, to define and state with accuracy the different views and theories on the subject under consideration; and, secondly, to discover and represent fairly the grounds and reasons for each theory or view, so as to show as completely as possible the genesis of opinion on the subject. It shall be the duty of the Council, in pursuance of this object, to encourage from all its members the most careful statement of differences in opinion, together with the completest statement of grounds for the same. It shall further require from the chairman of its committee the careful preservation and presentation of the individual differences of opinion whenever grounds have been furnished for the same by members of their committee. It shall invite the freest discussion of the reports of its committees, and whenever said reports are not so amended as to embody the new suggestions developed by such discussion, any member making such suggestion or objection may put in writing his view and the grounds therefor, and furnish the same to the secretary for the records of the Council. It shall prepare, through its president, with the aid of the chairman of the several committees, an annual report to the National Association, setting forth the questions considered by the Council during the past year, and placing before the Association in succinct form the work accomplished. It shall embody in this report a survey of those educational topics which seem to call for any action on the part of the Associ-

ation. The Council shall appoint out of their own number committees representing the several departments of education, and thereby facilitate the exchange of opinion among its members on such special topics as demand the attention of the profession or of the public."

No organization in the United States is so potent to mould and direct, through its published transactions, educational thought for the masses as the Council. Its influence was marked at Saratoga upon the proceedings of the National Association and of the American Institute of Instruction, whose discussions were characterized by that earnest search after truth which was peculiar to the debate in the Council. The Council forms a model upon which to organize sub-bodies of State associations, by which mode educational thought in the several States can be elaborated, formulated, and made of practical utility to the teachers in the commonwealths of the Union. In this manner the professional spirit of educators will be energized and enlightened throughout the land, for the *dicta* of the Council will have an authoritative nature which will be recognized and respected by the rank and file of teachers. As common schools dropped down out of colleges, so principles and practices of teaching percolate from profound heights of general principles downward through the strata of educational professionals who fill the school-houses of the land. It is with the spiritual universe as it is with the material,—the lower lands are watered and fructified from the higher, the oceans are supplied by the clouds; and because the mountain-snows melt downward from their profound height, the "little hills clap their hands for joy" and the rivers make green the glad valleys down to the seas; and as the calm and cool of the higher altitudes condense into palpable forms the imperceptible vapors which ascend from the earth, even so do profound and dispassionate minds of the age condense into tangible forms the mists which emanate from the every-day experiences of life. In this mode of ceaseless round of activity are the desert-wastes of the material and spiritual worlds made to produce more abundantly.

H. H.

EDUCATION VS. HEREDITY.

"Whatever helps to shape the human being, to make the individual what he is, or hinder him from being what he is not, is part of his education."—*J. S. Mill, Inaugural Address, St. Andrew's.*

This conception of education will bear limiting; it is too comprehensive. If the time during which "whatever helps," be restricted to the life of the individual from his birth, the definition may be accepted. But pre-natal conditions are among "whatever," and they are powerful to mould the man into "what he is," or "what he is not." The "aristocracy of blood," as Oliver Wendell Holmes terms it, is a great educator of childhood and adult life. This aristocracy means that each one of us is this day an epitome, a

Homunculus of all his ancestors; it means that our physical configuration our mental tendencies, and our moral and religious aptitudes are as they are, because we are the quintessence of the family line according to the old alchemist's notions of quintessence,—"the fifth or last and highest essence or power in the natural body," a sort of essence which survives not the fittest, but which is itself the fittest. In addition to the Fate which courses down the stream of time in the ancestral blood of man, there are the moulding influences which are accidental to maternity; these may condition the nature of a child so that its career in subsequent years may be quite beyond the reach of the teacher.

It is remarked often that persons with little education appear to be contented with their condition, desiring education neither for themselves nor their children; "the differentia of the savage is, that he has rarely any wish for self-elevation." Why should it be otherwise? Savages are embodied traits of character from years which are out of mind; their ancestral blood bequeaths to them tendencies which have inertia,—being in motion, cannot be deflected except by antagonistic power. Human life in the aristocracy of blood has inertia and momentum as much as a ball projected from a machine; it can be turned aside, but the power must be positive and persistent; whence by degrees mankind is elevated from the lower states. The effectual power that raises up man by education must be that which proceeds from his own will; unless this be the source of the springs of his action, the inherited inertia of his life will carry him down along the levels where his ancestors moved in the journey of life. The power of teachers is antagonized by the inertia of ancestry as much as by the circumstances which surround children while they are subjects of tuition in the schoolroom.

FOREIGN NOTES.

ENGLAND.—*The Higher Education of Women.*—On Thursday, June 1, a public meeting was held in the Egyptian-hall of the Mansion House in support of the proposed extension of the work of King's College, London, to the higher education of women. A large and distinguished company was present, including, among others, the Lord Mayor, Sir John Ellis (who presided), the Bishop of Peterborough, the Bishop of Manchester, the Rev. Canon Farrar and the Rev. Canon Barry of King's College. At this moment the necessity for a new and important development has been strongly urged upon the council of the college. The chief step of educational progress now generally felt to be necessary, and commanding, accordingly, a large share of public interest and support, is the promotion of the higher education of women on the sound and time-honored principles on which the work of the college has advanced successfully for the last half-century. The lectures to ladies given at Kensington for the last three years by the principal and members of the academical staff, although carried on under some difficulties, have achieved large and unexpected success.

It was stated that the council believed that they could not signalize the fiftieth anniversary of the college better than by attempting the proposed development. They desired to create a new department of the college, locally distinct from the others, but under the same system and government, in which the advantages hitherto enjoyed by male students might be extended to women also, and the work, which had been tentatively but auspiciously begun, might be completely and permanently organized. For that purpose they were already taking steps to obtain the necessary statutory powers. They could not, however, carry that desire into effect from the existing resources of the college, which were already heavily burdened. They believed that the new department only needed the erection and fitting up of a building sufficient for immediate purposes on a site which should be large enough to admit of future expansion, and that, when once started, it would be self-supporting; but they did not feel justified in taking any action until a sufficient sum had been raised to meet the expense of building without trenching on the existing college funds. For that purpose and for preliminary expenses it had been estimated that the sum of £25,000 would be required, for which sum the council earnestly appealed to public support.

Oral Instruction of the Deaf and Dumb.—The efforts made by Mr. B. S. Ackers for the education of the deaf in England, have been followed with much interest in this country. The society for the diffusion of the German or oral system of teaching, and the school for training teachers in the use of the same, were established chiefly through his exertions. A meeting in the interests of this society, held June 9 in the saloon of the Mansion House, London, attracted a large and distinguished audience. Some of the children educated by the institution were present, and gave an effective exhibition of the results of their training. The reading of the report was followed by a general discussion of methods, nearly all who took part favoring the German or oral system. Cardinal Manning stated that there were in existence 364 schools for teaching the deaf, of which 191 were conducted upon the German system.

The regular annual meeting of the society was held June 28, at Grosvenor House, Lord Granville presiding. The time was almost entirely occupied in witnessing the examination of pupils. Lord Granville made an address, in which he described the system of lip-teaching, and advocated its general adoption. He remarked upon the satisfactory results which the examination set forth, and stated that equally favorable reports had been received of the class conducted for the London School Board, under the superintendence of the association. The society proposes to raise $10,000 for the purchase of a suitable property for the uses of the Training College.

A Woman's Gift.—The collectien of pictures of flowers painted by Miss Marianne North has been presented by the artist to the nation and placed in a handsome building erected for the purpose in Kew Gardens. The building was erected at Miss North's expense. Impelled by a love of nature, Miss North traveled and painted the flora of many countries, even visiting Australia and New Zealand for that purpose. Finally, influenced by the desire that others should see and enjoy what had been the source of great pleasure to herself, she has made the public gift as stated. The collection is designated in the title of the catalogue as paintings of "plants and their homes," a title justified by the fact that, in nearly all the pictures, plants have supplied the motive, the other objects being merely accessory. A descriptive catalogue, published at Miss North's expense, contains the titles of the pictures and short notes concerning the life-history, etc., of the plants· Altogether there are upwards of six hundred pictures, representing vegetation in nearly all temperate and tropical parts of the world except Europe and Africa. Probably not less than a thousand species, including members of every natural order, are comprised in the collection. The gallery is open and free to the public at the same time and hours as the other buildings of the Kew Gardens.

The New Code.—Almost every mail brings us information of educational affairs in England, showing plainly that the "Department" is not committed to an arbitrary policy. In consequence of the general alarm felt at the increase of power conferred by the new code upon Her Majesty's inspectors, nearly all the educational bodies urged upon the Department the importance of issuing to the inspectors a code of instructions as a restraint upon the undue exercise of their discretionary powers. As a result of these representations, a minute containing instructions to the inspectors will shortly be placed upon the table of both houses of Parliament.

The opinion expressed in various quarters that the new basis of grants would have a depressing influence upon the poorer schools, especially those in rural districts and the worst sections of London, which above all others need encouragement, has won from the Department assurance that due allowance will be made in all such cases.

The National Society, which was organized for the education of the poor in the tenets of the established Church, and whose schools receive grants subject to the usual conditions, has raised a new point in discussing the code. The society objects to the attempt to combine secondary and primary instruction in elementary schools; it is claimed that the inclusion of specific subjects, Latin, French, Botany, Animal Physiology, Chemistry, and Physics, as elementary school subjects, not only works confusion in the elementary schools, but is a hindrance to the proper organization of secondary schools for which the country is suffering. The society, probably, does not consider that the argument is in the direct line of an Americanism,—the graded school.

Mr. Mundella stated recently, at a complimentary lunch, that he was on the lookout for an opportunity to introduce into Parliament a bill making provision for intermediate and higher education in Wales. He declared that Mr. Gladstone was most anxious that the subject should be pressed forward. In 1878 a bill for the improvement of intermediate education in Ireland passed both houses. In the House of Lords, in which the measure originated, it was not anticipated that girls would come within the scope of its operations. The House of Commons extended the provision to girls. The result is that the funds allowed have proved inadequate, and a bill has just been introduced to provide a sum to meet the deficit. The figures quoted in Parliament show that the system has made remarkable progress. In 1879 there were 3,671 boys and 979 girls under intermediate instruction in Ireland; in 1880 the numbers had increased to 4,693 boys and 1,477 girls, and in 1881 to 5,714 boys and 2,033 girls.

The Church Schools.—The committee of the National Society in their report for the year ending Dec. 31, 1881, shows that the average attendance in Church Schools has risen from 1,471,615 to 1,490,429, being an increase of 18,814 for the year; while the accommodations have risen from 2,327,379 to 2,351,235, or a net gain of 23,856 school places. There is a decrease of £4,891 in the annual subscriptions for Church Schools during the year, but the endowments have risen to the extent of £3,724. Commenting on the remarkable vitality of the church schools, evidenced by these figures, the committee points to the difficulties their managers have had to encounter, owing to the establishment of rival schools on all sides, tending greatly to increase the cost of education; while, on the other hand, the sources of voluntary help have been in many cases diminished, owing to the imposition of rates for the support of Board Schools. In spite of these drawbacks, the Church provides more than one-half the school accommodation of the country, and educates nearly twice as many children as are being educated in the Board Schools, its contribution for this purpose, in the shape of annual subscriptions, amounting to more than half a million a year, besides the vast sum represented by endowments, and by the value of more than 1,200 school-buildings established by church people. The income of the National Society for the year from voluntary sources, exclusive of legacies, was £13,128 ($65,640).

The effect of the "Education Act" upon Church Schools is watched with deep interest in political and ecclesiastical circles. The Bureau of Education has received the seventh annual report of the "National Society for Promoting the Education of the Poor in the Principles of the Established Church," of which the following extracts are especially noteworthy:

> "At the outset your committee would express their gratification at the progress made by Church Schools during the year ending August 31, 1880. In spite of the competition of school boards the average attendance in church schools in receipt of the Government grant has risen from 1,426,595 to 1,470,615, being an increase of 45,020 for the year. The accommodation has risen from 2,301,073 to 2,327,379, showing an increase of 26,306 The annual subscriptions for the maintenance of church schools amounted to £587,272, showing a decrease of £12,369, as compared with those for the previous year. . . . .
>
> Going back for a moment to the year 1870, your committee observes that during the ten years which have since elapsed, the accommodation in elementary schools has more than

doubled itself. The School-Board system and the voluntary system have been at work side by side, and while the school boards, with their practically unlimited resources, have created accommodation for 1,082,634 children, Christian zeal and energy, unaided by the rates, have, in exactly the same periods, provided accommodation for 1,279,535. In the year 1880 the Church alone was educating nearly twice as many children as were being educated in Board Schools. The various religious denominations taken together were contributing about £750,000 in annual subscriptions from their benevolent members; whilst school boards were levying about an equal sum in school rates for the education of little more than one-third of the number of children that were being educated in denominational schools."

Firth College.—The report of Firth College, Sheffield, for the year 1881–2, is just at hand. This is one of the institutions founded in recent years for the promotion of higher education in the great provincial towns of England. It proposes a three-fold work: 1. University teaching; 2. Technical instruction adapted to the needs of the district; 3. Popular lectures of interest. The entire attendance upon day and evening classes for the session of 1880–81 was 474. The evening class in biology had largest attendance, viz., 153; and chemistry the next, viz., 60. The largest day class was that of English literature, numbering 47.

University of London.—Of 800 candidates at the recent matriculation examination of the University of London, over 500, or 62.7 per cent., failed to satisfy the examiners. In previous examinations only about 50 per cent. have failed. The Honors Division has dwindled to 10 persons, as against 38 in 1881. The University announces a yearly examination in the art, theory, and history of teaching. No candidate will be admitted to the examination who has not taken a university degree. Each candidate who passes will receive, at the public presentation of degrees, a certificate to be called the "Teacher's Diploma," under the seal of the university, and signed by the chancellor.

ENGLISH COLONIES.—*Mysore* (*British India*).—The system of popular education in Mysore has a remarkable record for 1880–81. Though still suffering from the effects of the terrible famine, and with half the cost of education thrown upon local funds, the record shows an increase of schools, government and aided; increase in the number of pupils, and in the school income. In ten years the number of schools has risen from 544, with 20,958 pupils, to 1,087, with 42,657 pupils (38,713 boys and 3,944 girls; 82 per cent. of the pupils are Hindus, 10 per cent. Mohammedans, and the remainder Europeans, Eurasians, etc. The pupils are distributed as follows: 182 in university grade; 7.2 per cent. in secondary; 89.7 per cent. in primary. At the close of the year there were 3,077 girls in primary grades. Female education is clearly gaining in popularity among the lower classes, as evidenced by the part that several applications have been made for the establishment of new Hobli schools for girls.

FRANCE.—The Minister of Public Instruction has been making every preparation to put the law of March 28 into execution the ensuing school-year. The first measures undertaken had reference to the organization of the municipal commissions and the creation of the school funds. The commissions are instituted in each commune to watch over and encourage attendance upon the schools. Since membership is not confined to the laity, here might seem to be an open door for the introduction of clerical influence into the schools. The determination of the government to with stand this influence at every point is shown in the circular relative to the authority and rights of the commissions, addressed to the prefects by the Minister of Public Instruction, June 15. The circular sets forth that, in-order to discharge the duties intrusted to them, — viz., making up the lists of children of school-age, inquiring into the causes of absence, assigning penalties, etc., — it is only necessary that the members of the commissions should examine the abstracts of the registers, which teachers are obliged to submit to the mayor and the primary inspector at the end of each month. They have no right of inspection and control, and no authority to enter the schools.

In order that the appropriations for 1883 may be sufficient for the number of schools required to give effect to the law of obligatory instruction, the Minister of Public Instruction ordered the most careful examination into the condition of each commune. He made his statement to Parliament in July, and shortly after the budget commission of the Chamber of Deputies submitted their estimates for 1883. The total education estimate is upward of $27,000,000, irrespective of the departmental grants. About half this sum goes to elementary instruction. The report of the director of primary instruction for the year 1880–81 gives 74,441 schools of all classes, with an enrollment of 5,049,363 scholars. The increase in the number of scholars over 1879–'80 is, in round numbers, 100,000. The lay public schools have gained 145,381 scholars; schools under religious orders have lost 80,510; the balance of increase is in private schools. The number of lay teachers is 73,379; teachers belonging to religious orders, 49,381. Of the former 4.6 per cent are not certificated, and of the latter 65.1 per cent. This is a decrease below the number reported in 1879–'80, thanks to the execution of the law of June 16, 1881, concerning diplomas of capacity.

Schools for girls are multiplying. The normal school at Fontenay-aux-Roses is training women-professors for the primary schools, and that at Sevres professors for girls' secondary schools. These secondary schools, or Lycées for girls, are beginning to make their appearance in various towns. The first superior, or higher primary, school for girls has just been opened in Paris. Scholars are admitted at 12 years of age. The course includes, in addition to the usual branches, domestic economy and the cutting and fitting of garments.

GERMANY.—Professor Mommsen of Berlin University, who sits among the Secessionists in the Imperial Parliament, appeared at the bar of a criminal court June 15, on the charge of having, in a speech delivered in the neighborhood during the general election, last autumn, slandered Prince Bismarck. The court was crammed, several of the professor's parliamentary colleagues being present. The accused pleaded not guilty, arguing with no slight ingenuity that the expressions complained of, such as "policy of swindling brandy-burners," and "corn speculations," etc., did not apply to the Government, but generally to the new economical prophets of the era. The court took this view of the matter; and, refusing to listen to the motion of the public prosecutor for a fine of 500 marks, acquitted the professor, who, in a short speech, asserted his innocence. There was some applause in court on the decision being given; and on repairing forthwith to the Reichstag, the learned professor was warmly congratulated by many members of his party.

In Hamburg the School Aid Society has arranged to have boxes placed in 120 coffee-houses, restaurants, etc., in which money is to be collected for the Fresh Air Fund. About 8,000 marks (mark = 25 cents) are required to accomplish the intention of the Society, which is to send 500 children into the country during the summer vacation.

The discussions at the conferences of German teachers have a very practical character. At the conference held on the 10th of May at Königsberg, the chief topics were "Chemistry in the Public Schools," and "Methods of Teaching Geography." At the conference held May 31 at Caminus Pomerania, the discussion turned chiefly upon religious instruction in the common schools.

Prussia.—The Bureau of Education has received a report containing interesting information with reference to the instruction of convicts in Prussia. The subject has received special attention for twenty years. The number of convicts instructed in 1879–80 was 9,144; the number of teachers engaged in the work, 70. Of 7,802 prisoners, 82 per cent. had been liberally educated, 26.08 per cent. had received a complete primary education, 5.39 per cent. were able to read only, and 15.43 per cent. were illiterates. The school course for convicts extends over one or two years, and includes reading, writing, arithmetic, singing, Biblical history for those who desire it, and sometimes drawing. The number who took Biblical history in 1880 was 16,663; viz., 8,738 Protestants, 7,618 Catholics, and 277 Israelites. Convicts above 30 years of age who cannot read, receive lessons in reading in addition to those in Biblical history, and take part in the other exercises only at their own request. Even those convicts who are in solitary confinement are taught during the time of their imprisonment.

In the province of Eastern Prussia, which has already seven seminaries or colleges, an eighth is to be opened at Ragnit.

AUSTRIA.—The city of Vienna has recently appointed 477 male teachers with a view of reducing the maximum number of pupils to one teacher to 40.

Hungary.—The Hungarian Teachers' Relief Association has a capital of fifteen thousand dollars. The Association is erecting a home for aged and disabled teachers, similar to those established in many parts of Germany.

RUSSIA. — The *Roosoki Kooryer* gives figures showing that 266 students were expelled from Moscow University during the present academic year, most of them, no doubt, for political causes. The career of these young men is entirely lost.

The "Damen-Universität" (University for Women) in St. Petersburg reported, recently, 980 students and 42 assistants. Of this number 150 attend the lectures on physics; 50, those on chemistry; and 100, those on physiology.

SWITZERLAND. — The federal constitution provides that primary instruction shall be placed exclusively under the civil authority; that it shall be obligatory, and in the public schools gratuitous. The article adds: "The confederation shall take necessary measures against cantons which do not fulfill these obligations." In the absence of an explicit law, the confederation has not been able to carry out these measures satisfactorily, and the progressive party recognizes the necessity of a law upon primary instruction; here they are opposed by the Catholics and conservative Protestants Two years ago the federal council proposed to the Chambers the creation. of the office of "Secretary of Public Instruction." The proposition remained in suspense until April, 1882, when it was carried by a vote of 86 against 30. June 14 the "Council of the States" ratified the decision of the National Council. The enemies of progress will not rest the matter here. By the terms of the constitution all decisions of the Chambers may be submitted to popular vote upon the demand of 30,000 citizens. The chiefs of the clerical conservative opposition are straining every nerve to secure the requisite 30,000 signatures.

ITALY. — The educational budget for 1882 gives a total estimate of $5,088,478; upwards of $880,000 were for elementary schools; $750,000 for technical schools; $1,500,000 for the seventeen state universities. The total number of pupils in the state universities and other superior institutions, in 1881–'82, was 13,126. This number does not include students of theology who receive their training in the Episcopal seminaries of the several dioceses. The Minister of Public Instruction, Baccelli, is deeply interested in primary schools, but finds little coöperation in the Chambers. A royal decree of May 28 instituted an examination for the highest class of the elementary schools prior to the pupils leaving that grade. The examining board is to consist of the class-teacher, another teacher appointed by the municipality, a professor from a gymnasium and one from a technical school, and a school-inspector as presiding officer. Pupils passing the examination receive a diploma which entitles them to admission to the lowest class of any gymnasium or technical school. This decree brings the elementary grades into intimate connection with the secondary.

SPAIN. — A National Pedagogic Congress was held in Madrid, beginning May 28. At the opening session the King and all the members of the foreign diplomatic corps were present, and the King made an address. More than a thousand teachers were in attendance. Thirty-three conclusions were affirmed by the Congress, among them the following relating to primary education: A special inspector of primary education should be appointed; primary instruction should have special representation in the council of public instruction; primary instruction ought to be obligatory and gratuitous; manual training should be introduced in the infant schools, but not continued in the primaries; the kindergarten presents superior advantages to other kinds of infant schools; the salaries of female teachers should be equal to those of males. The Catholic journals discover in the omission of religious instruction in the programme of the normal course for teachers of infant schools a step toward placing the schools under the laity

NORWAY.—The University at Christiana comprises five faculties, all filled by persons of known merit. The students numbered 732 in 1881. Candidates for admission must be 17 years of age, and pass the required examination. Students of medicine study from six to eight years, and then receive (upon passing a described examination) the title of "laege" (physician). They generally receive their doctor's degree in some other country. Four years is given to legal studies, and a rigid examination is required at the close. The course in theology also extends over four years.

JAPAN.—The seventh annual report (1879) of the Japanese Minister of Education states that there are 28,025 common schools in Japan, of which 16,710 are public, and the remainder private. The increase over the previous year is 1,316 of the former class and 125 of the latter. The number of high schools is 107 public and 677 private, the increase being 42 and 63 respectively. Many kindergarten and primary schools have also been established. The private schools play a most important part in Japanese national progress. Many of them have hundreds of students attracted by the fame of a single teacher. The most celebrated of these leaders of youth is Mr. Fukusawa of Tokio, whose translations from European books and original works on the political and social questions of the day are read far and wide in Japan. The students of this gentleman fill many of the most important offices in the State. Long after the ordinary course with their teacher is finished, and the young men have gone out into the world to do for themselves, they contrive to reside near him and to study under his direction. A number of his students recently formed themselves into a patriotic society and established a newspaper, in which the acts of the government are freely criticised.

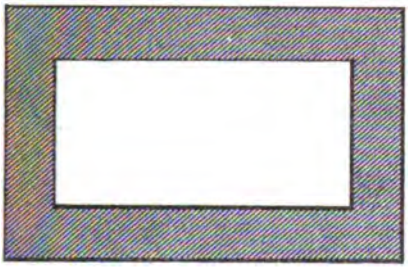
PUBLISHER'S NOTE.

The following plates accompany the article on "Manual Education in Public Schools," which appeared in the last number of EDUCATION. References to the figures in the plates, by number, were made in the article, but the plates were not lithographed in time to appear in the June–July No. of the magazine, and are therefore presented at this time. Particular attention is called to the plan of making the industrial drawing, which is a prominent feature of education in most well-conducted schools, a means of conveying thought and of receiving ideas and illustrating each in concrete form. This logical development of the scheme of object-teaching and its application to manual instruction is well calculated to illustrate the importance of such work as Mr. Marvel's article suggests, and to indicate clearly its intimate relation to work already in successful operation in public schools.

While words, spoken and written, are of great value in the expression of exact thought, the employment of diagrams and objects to convey ideas add materially to the clearness and exactness of one's apprehension of ideas, and add the training in verification by which the impressions gained by reading the statements and inspecting the diagrams are proved by the actual manifestation and study of the objects described.

A careful study of these plates, in connection with the article in the last number of EDUCATION, will enable those interested in the subject to gain a very full idea of the work which is described.

PL. I.



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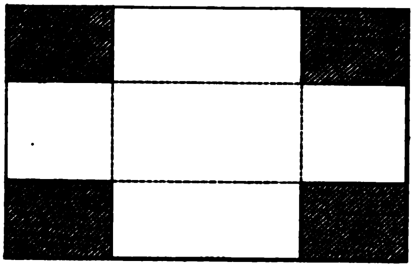

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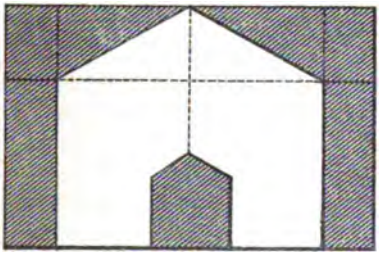

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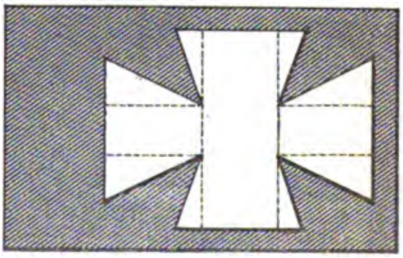

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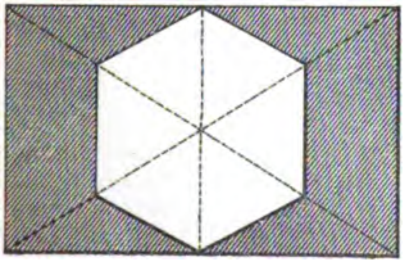

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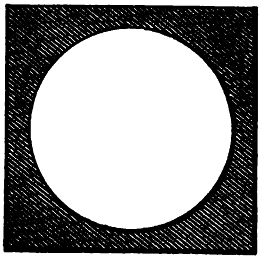

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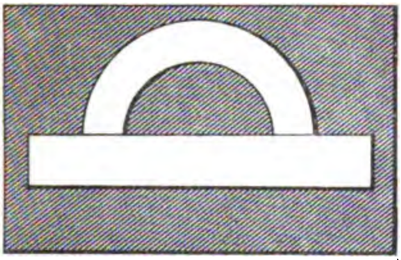

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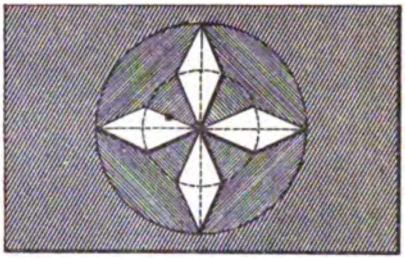

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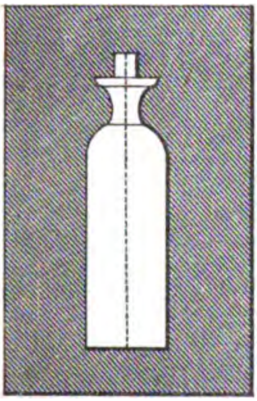

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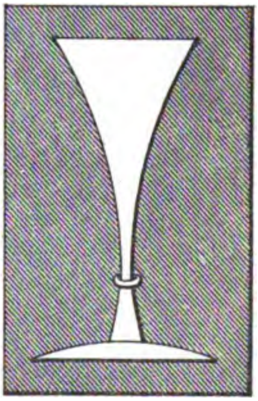

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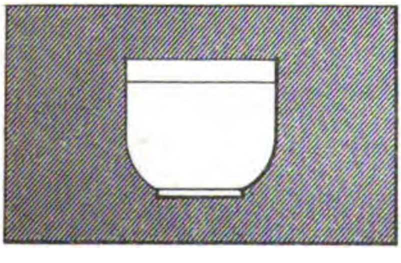

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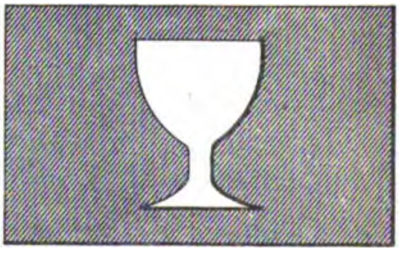

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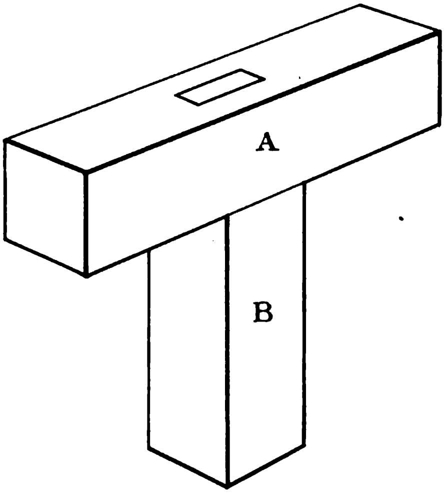

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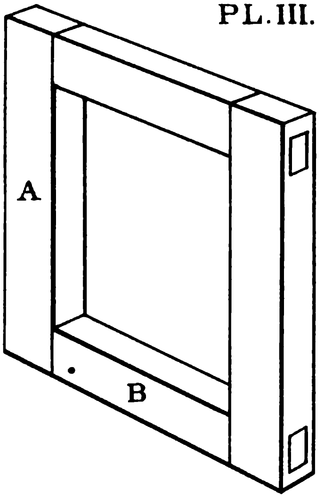

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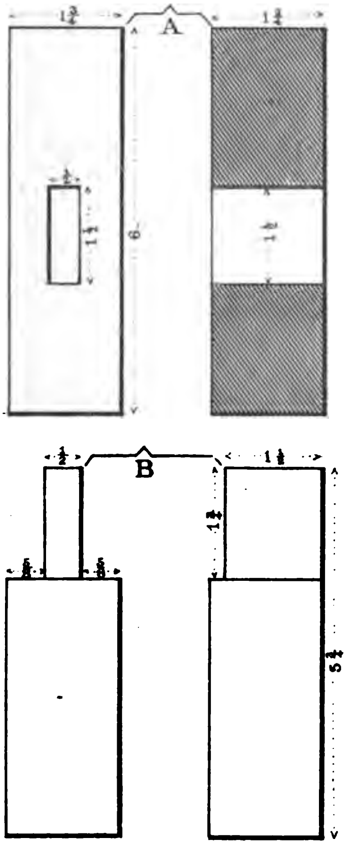

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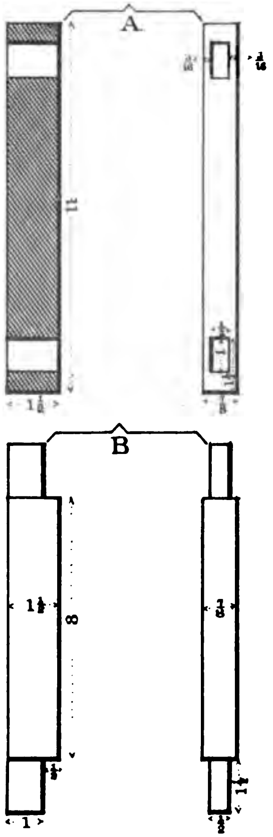

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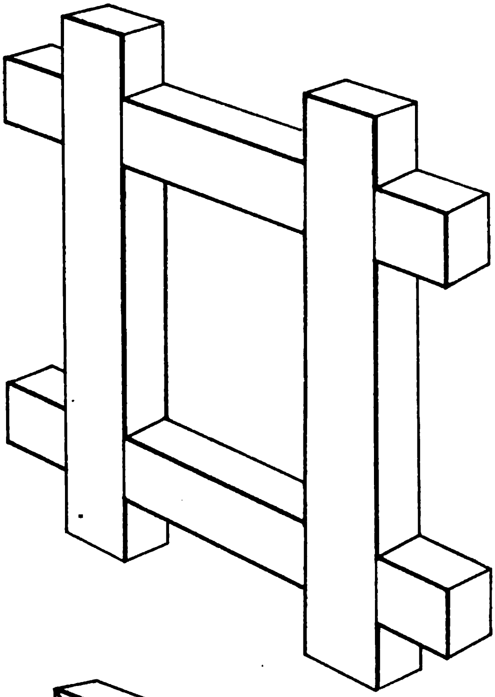

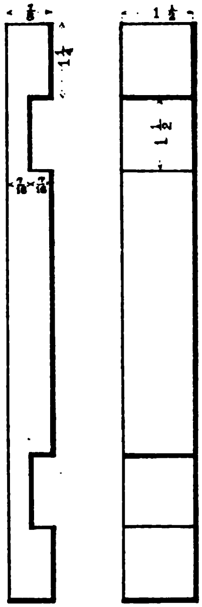
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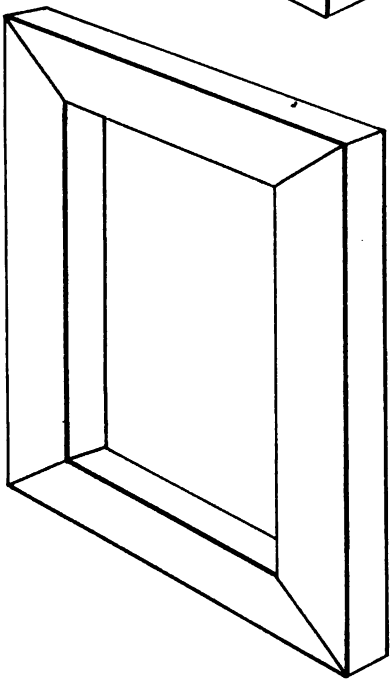

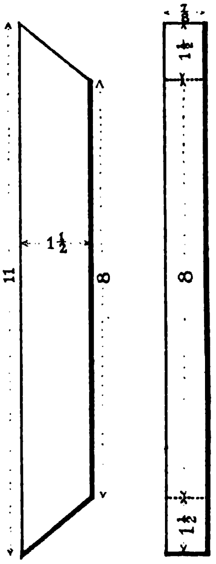
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VOL. III.—NOVEMBER–DECEMBER, 1882.—NO. II.

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EDUCATION.

No. II.—November, 1882.

PREMIUM ESSAY.

THE TRUE ORDER OF STUDIES IN PRIMARY INSTRUCTION, AND THE PROPER TIME FOR EACH.

BY ZALMON RICHARDS, A. M., WASHINGTON, D. C.

Introductory Remarks.

The course of training herein discussed is equally well adapted to the schools of the city and the country, whether graded or ungraded; provided, always, that the teachers are properly qualified and trained. While the course hereafter pointed out is flexible, it is believed to be specially adapted to the most natural and philosophical method of grading, which should always depend upon the degree of intelligence and mental development, rather than upon percentage by marking. Believing, also, that *moral training* is an indispensable part of school training, without laying down any dogmas, specific rules, or methods, and ignoring all religious creeds, the least that can be said here is, that one of the indispensable requisites for a good teacher is *moral fitness*, which should never be disregarded in the preliminary examination of teachers.

The teacher should have *positive* and *active* moral characteristics. In other words, he should be a living example of the requisite virtues of a true human character. He should have such a training as will fit him also to have a clear understanding of all the practical principles of the "Golden Rule," and to illustrate and enforce the same by positive precepts and daily instruction. He should be qualified and ready to seize every opportunity (every day will furnish some) to enforce some healthful moral lesson, beginning with the first day of school.

THE ESSAY.

In determining what should be "the true order of studies," it must be taken for granted that the term "studies" means the same as subjects of training. The question then is, "What are the *proper subjects* for primary instruction?" Without discussing here the philosophy of mental development, specifically, it must also be taken for granted that the subjects of training should be such as most nearly correspond, and are most naturally adapted, to the order in which the mental faculties are developed.

All must admit that knowledge must be imparted, for the most part, at first, through the perceptive faculties; and that the reasoning and the reflective faculties are developed more slowly; and that mere memorizing ought never to be substituted for reflection and reason, as is too often done. Every experienced and thoughtful teacher must have learned that children in the primary grades of school instruction are unprepared, and even unable to study, in the true sense of that term; and that they must learn by being taught how to study. This, then, must be the principal work for children in the primary schools.

Before the true course of training can be fully understood and appreciated, we must divest ourselves of the almost universal notion that the children in the lower grades are to gain knowledge by studying lessons; for there is only a small portion of time, during the usual course of elementary training, when children are capable of studying. Ability to study depends upon three conditions: First, upon the ability to read and understand language, which is the principal storehouse of knowledge, as well as the medium for conveying all knowledge, which is outside of and beyond individual observation and experience. The acquisition of language, then, must become the chief work in elementary training, and must, consequently, form the most important part of a true order of studies or training.

In the second place, ability to study, or to gain knowledge by study, depends very much upon the proper development of the *observing* faculties, or upon the habits of observation. In proportion as any person has the ability, and the opportunity, and the will to observe the facts and the phenomena in the world around him, his demand for books and the necessity for linguistic training will diminish. A large amount, and, indeed, the most practical part of our knowledge, may be derived from observation, provided we have the opportunity, and have learned how to use our observing faculties properly.

Teachers can materially increase their teaching power by becoming careful and accurate observers. Very many people seem to go through the world apparently oblivious to the myriads of opportunities for gaining knowledge, simply because they were never trained to habits of observation. Every course of training, therefore, should point out the best methods of cultivating the observing powers. To make a course of studies complete there should be exercises every day, in every grade, designed to cultivate these powers.

Again, in the third place, ability to study depends very much upon experience, or upon a proper preparation of young minds for acquiring knowledge by experimenting,—by personal examination of all objects and sources of knowledge. Nothing serves to fix knowledge in the mind more surely and permanently, and make it more ready for use, than working it out by experiment. All successful teaching is, therefore, objective, from the kindergarten to the university. In order, then, to prepare the pupil for studying, the elementary course of training should be such as will secure the most desirable instruction in *language, observation,* and *experimentation;* but as far as possible the course of instruction should be such as to secure simultaneous and harmonious development in each of these prerequisites to ability to study.

As the first and most important part of school-training consists in acquiring and in learning how to use language correctly, we must first find out, if possible, the best methods of teaching it. At this stage we are not required to teach language theoretically, but practically,—not its laws, but how to acquire and use it,—language as it relates to the realities of life, and especially to child-life, should form a part of early school-training. Language has become the most important representative of thoughts, principles, and facts. There is a language of language,—of its laws and methods of construction; a language of poetry, of prose, of rhetoric and logic; a language of geography, of arithmetic or numbers; a language of philosophy, mental, moral, and physical; a language of physiology, animal and vegetable; and a language of the arts and the professions, or employments of life. When the young are well trained in the language of the realities and idealities of life, or when they have mastered the language of the various branches of school-training, they have gained the most essential part of that training; have acquired a large amount of useful knowledge, and have a good preparation for the practical duties of life.

GRADES OF LANGUAGE TRAINING.

In all the grades of language training it must be continually borne in mind that the faculties for observation and experimenting must be constantly in use.

First: The Work Grade.

To acquire the proper knowledge and use of language, the first thing necessary is to learn to recognize readily the *oral* and *written* signs of all ideas and things. Naturally, then, things must precede words. Comenius says: "Things and words should be studied together; but things especially, as being the object both of the understanding and of language." Again he says: "A boy may be able to say over a thousand times, a thousand words; but if he has not the mastery of the things, of what benefit will all that multitude be to him?"

Objectively, then, the first natural step in teaching language is to impress the idea of some object or thing upon the learner's mind, which is within his comprehension, by the aid of the object, picture, or illustration. When the *idea* is clearly and permanently impressed upon the pupil's mind by any means whatever, and the oral word-sign is made familiar to the ear, then the written or printed sign of the *same* idea should be made so familiar to the eye that the object, or picture, or the oral word-sign, shall call it to mind, and *vice versa.* This course should be pursued continuously and daily, with every new idea imparted, by adding new ideas as fast as the learner can comprehend and retain them. To secure a perfect retention of these new ideas there must be daily reviews and repetitions of the ideas and signs learned. But, again, while mastering the word-signs, orally as well as visibly, the learner should be taught to recognize at once all the elementary sounds in the new words, and, finally, give the names of the characters and combinations of letters commonly used to represent the sounds.

When the above work has been well done the learner will be able to call most new words quite readily by giving the sounds usually represented by the letters. But the meaning of every new word should be taught *objectively.*

Second: The Sentence Grade.

The next grade of language-training will introduce the learner to the work of getting new ideas and new knowledge from words used relatively in short and easy sentences. In this grade, as in the first grade, new words, as representatives of new ideas, must, as a matter of course, be continually introduced, and learned as heretofore directed, until the learner has largely increased his vocabulary and has acquired the ability to use understandingly and readily all the words in common use, and to make out the meaning of words from dictionaries. To be able to acquire the relative ideas of words used in sentences is an important step in gaining knowledge through the perceptive faculties. Simple sentences, therefore, must be used at first, which may be modified in various ways, greatly to the growth and pleasure of the young mind. As the mind becomes more developed, simple sentences may be compounded and variously modified so as to furnish appropriate exercises for preparing the pupils to take pleasure in gaining knowledge directly from books.

But the learner will be expected to acquire considerable skill in clothing his own ideas correctly in *oral* aad *written* language. One of the continued exercises of this grade should be the reproduction in the learner's own language of the ideas which he may have gained from reading and listening to the language of others; but every reproduction of an oral or of a written idea must be put into as accurate language as possible. It may be proper to say here that this peculiar training should be made prominent in every grade of school instruction. But to make the preceding grades comprehend all the essential training in the language of common things, the language drills should embrace *all subjects* which come within the learner's comprehension, beginning with the simplest elements in all cases.

Third: The Practical Grade.

The next natural step in language-training consists in applying language to the acquisition of the various branches of study, and to the special realities of life. Every language-lesson should be so designed, if possible, as to impress some valuable knowledge upon the young mind. The lesson is just as efficient and pleasing to the child if it contains good sense and something useful, as when it contains nothing but nonsense and useless words. No child can afford to fritter away any portion of his life in senseless and useless exercises, since there is vastly more useful knowledge, adapted to child-development, than he can acquire.

First, there should be practical language-lessons in arithmetic or numbers. Arithmetical reading-lessons should be prepared, or selected, in descriptive and story form, which contain numbers and simple arithmetical operations, to be performed before the pupil can fully understand the lessons. The most effectual mode of training pupils to think arithmetically is to require them to read the language of numbers at the same time that they are learning the use of common words. If appropriate books are not provided for this kind of training the teacher should prepare and tell some suitable stories for training children to think arithmetically, and thus make them familiar with the terms and elements of arithmetic, preparatory to the studying of a complete work.

Again, there should be practical language-lessons in geography, collateral with those in arithmetic. Geographical reading-lessons, therefore, should be selected or prepared in connection with globes and maps and other apparatus, for illustration, to make the pupils familiar with the language and elements of geography. In this way they are to become familiar with reading and spelling geographical names, so that, if desirable, they may be prepared to take up afterward, more successfully, an elaborate and complete course.

Again, without further specification, reading-lessons, prepared or selected,—designed to train the children in the language and elements of all the other necessary branches of school-training, — should be used as collateral exercises with those above-named. In this way the children will become familiar with the language and elements of civil and natural history, human physiology, botany, etc. In addition to the one-year course, hereafter prescribed, in kindergarten work, four years will be sufficient to go through the preparatory course of training in language, observation, and experimentation, previous to entering the grammar schools.

After this, the pupils will be well prepared to take up successfully the study of the usually complete branches of school-training, in complete text-books, provided the language-reading lessons heretofore used have contained a sufficient amount of facts and knowledge within the range of the comprehension of the pupils; and further, provided the teachers have the qualifications, training, and experience suited to such work.

But the chief obstacles in the way of securing the most satisfactory success, in carrying out the foregoing principles of language-training, will be found in the want of properly qualified teachers and of appropriate reading-books. The right kind of normal school should furnish teachers theoretically and practically trained; and when such books are prepared as will contain the matter, and point out the work to be done in the elementary linguistic training of children, the work of educating the children in our schools will be more efficient, and more agreeable to the pupils as well as to the teachers. Until suitable books are furnished, every effort should be made to secure such works as come nearest to these principles.

If the first five years' training of children be conducted upon the principles above indicated, they ought to become quite familiar with the elementary principles of arithmetic, geography, and all the other necessary branches of school-study; and they will have so learned to write a fair hand and to spell all common words that, if for any cause they should be unable to continue in school, they will have made such advancement as will enable them to perform the common duties of life with much success. They will be prepared also to gain knowledge from books, and to study without the aid of teachers. This becomes, then, a very important period in the lives of children. Those who may continue in school will have a thorough preparation for the studies of the grammar schools, and those who must take another course of life will find that the training they have received will be of great value to them.

THE KINDERGARTEN.

Before proceeding further it may be necessary to say, by way of explanation, that the first year of the five-years' course, beginning at the age of five, might well be called the *kindergarten year.* Every thinking, logical, and philosophic mind must see that the fundamental principles of the true kindergarten are natural, and lie at the foundation of all correct child-training.

It is highly desirable, therefore, in order to secure the proper development of children and prepare them for the course of elementary training to be hereafter described, that they should enjoy one year's training, at least, in a well-regulated kindergarten, perhaps somewhat modified from Froebel's plan. But as there are few, if any, institutions in this country which work strictly upon Froebel's plan, and as there are very few of the many kindergartens of the country which wholly harmonize in their work, there should be devised some plan which shall secure the most valuable and important elements of Froebel's system, to be used in such a manner as to harmonize with the appropriate work of a well-organized primary school. The attempt will be here made to make the following course of training embrace these elements, harmonized.

It may be here premised that this first year's course of training, as well as the future course of elementary training, should be based and conducted upon the analogical principles recognized by Froebel, in selecting gardening as an appropriate representation of child-training.

1. The good gardener will select the purest and best seeds and rootlets for sowing, and transplanting in his garden. So the good kindergartner will select practical truths and useful realities to be used in training children.

2. The good gardener will break up and prepare the soil and get it ready for the reception of seeds and for the influence of heat, air, and moisture. So the good kindergartner, or teacher, will be very careful to prepare the young minds for the reception of instruction by proper appeals to the emotions, the feelings, the curiosity, and the interests of his pupils.

3. The good gardener will not permit the young plants to grow in the wrong direction, or become choked with weeds, or to be exposed to injurious outside influences; but, if necessary, force the plants to incline in the right direction, eradicate all weeds and remove obstructions, and protect the plants against all storms, frosts, and marauders. So the true kindergartner will watch carefully every improper bias and inclination and disposition of the young minds, and bring them under proper influences and give them proper direction, *voluntarily* if possible, but *forcibly* if necessary. Recognizing these principles practically, and eliminating all the unessential exercises of the kindergarten, and spending less time in many other exercises, all the real advantages of the kindergarten can be secured in one year, and the pupils can be introduced successfully into the higher grades of language-training in primary schools.

The work of the kindergarten year may be divided appropriately into *two grades*, of about twenty weeks each. This feature may be modified, however, to meet the views of the kindergarten teacher. But there should always be attractive, appropriate, and comfortable rooms provided. These rooms must be furnished with the most appropriate seats, tables, and other necessary furniture. And, finally, each school must be supplied with the proper kind and amount of kindergarten apparatus and material. The last, but not least, important requisite in the kindergarten rooms, is an experienced, well-trained, well-educated, conscientious teacher, who is a lover of children and who can control herself as well as the children.

THE FIRST OR KINDERGARTEN GRADE.

While the exercises of this first year's training must be under the direction of the teachers,—who must have full liberty to select and arrange the special work,—there are certain general principles and ends which must distinguish and regulate the whole work.

1. This is the period when children should be made familiar with common things, and form habits which will follow them through life.

2. The length of time which should be spent in the school-room each day must depend upon the nature and character of the exercises in which the children are to engage; but in ordinary cases it should not be more than three hours, provided the whole attention of the children is engaged. About one-third of this time should be spent in such plays, songs, and exercises as will develop properly the physical powers of the children and keep them in robust health. Most of the kindergarten plays will serve a good purpose; but the teacher should have inventive power enough to vary or modify them, or introduce

something new, when necessary to reëngage attention and increase the interest and pleasure of the children. These exercises should be such as will employ the hands, the feet, the eyes, the ears, the voice, and all the muscles of the body; but they should never become dull and monotonous. As soon as the interest begins to flag, a change should be made, with the least ceremony and delay possible.

3. In all the other exercises, which may be called mind-training, the chief object should be to wake up mind, develop and strengthen its powers, in every exercise of every kind. These exercises should be such as will promote and cultivate the habits of attention and observation; quickness of perception; ready discrimination of form, shape, size, length, breadth, height, color, and all other characteristics of bodies and things which are cognizable to the perceptive faculties. Here may be used the sphere or ball, the cylinder, the cubes and other solids, with their various modifications; all kinds of surfaces, lines, points, etc., with such applications and uses as are usually made in using Froebel's twenty gifts.

The teacher must bear in mind continually, that in using these gifts, the purpose is to increase the intelligence of the children, improve their powers of observation, and develop habits of accurate discrimination, so that they may readily distinguish similarities, contrasts, and differences in objects of sense. The works of nature and of art will furnish an endless variety of new educational gifts, and at the same time present thousands of examples for illustrating the principles involved in these gifts.

4. Again, the laws of human development demand that, from the beginning of this course of training, the children should be made familiar with the word-signs of as many of the objects presented, and with the characteristics of the same, as possible. During the first part of this year the children may learn the word-signs,—which are presented to the *ear*,—as a beginning to the work of oral language-training. During the last part of this year the children should begin to learn the word-signs of the objects with which they are acquainted, as they are presented to the *eye*, as a beginning to the work of written (or printed) language-training.

As there will be many schools which will not introduce the kindergarten grade into their course of training, the method of teaching sight-reading will be pointed out in the next, or first primary grade, to which the teacher of the kindergarten grade is referred. (This is done to avoid repetition.)

The above suggestions are sufficient for a properly qualified teacher of the first, or the kindergarten grade, who ought to be able to outline specific daily exercises, based upon the above principles.

COURSE OF PRIMARY TRAINING FOR FOUR YEARS.

The training in the several following grades will, for the most part, be indicated suggestively, as heretofore indicated in the kindergarten grade. This is done for two reasons: First, because the fundamental principles of training, which should govern the teacher in the kindergarten, are believed to be equally important and necessary for the teachers in all the following grades. Second, because, when a properly qualified teacher knows what work is to be done, and what results are to be attained in certain periods of time, it is believed the following suggestions and methods of training for each grade will be sufficiently specific. It must be taken for granted, however, that there is a supervising head who is master of the whole art of teaching, and can drill and train the teachers for this work.

FIRST YEAR — PRIMARY.

1. The average age of children in this grade should be ordinarily from six to seven years.
2. No class-exercise should continue over twenty minutes; then there should be a change of some kind.
3. During any prescribed exercise there should never be anything else going on in the school-room which is calculated to distract the attention of any member of the class.
4. Not only should the attention of all the class be free from distraction and diversion, but special effort should be made to awaken and keep up the deepest and liveliest interest, on the part of the children, in the subject-matter of every exercise.

SPECIAL WORK.

First Exercise. A language lesson should be given. Short, interesting, and instructive stories should be selected or prepared by the teacher with the view of training children to listen and acquire the use of words. The story should be made up of *truth* and *facts*, and be told in a simple and interesting manner, but always in good language. Then the children should be required to repeat the same story in the best language they can command, with the assistance of the teacher when necessary. At first very short stories should be told, occupying about one minute; and then the time may be lengthened as the minds of the children are developed. This should be a regular daily exercise.

Second Exercise. To increase intelligence, form habits of observation, and keep up the acquisition and use of language, objects of interest to the children,—of almost any kind,—should be collected daily, and brought into school by the children as much as possible, and made the subjects of explanations and of conversation, in order to impress upon their minds the prominent characteristics and names of the same. The more the children select their own objects, the more interest they will feel and the more will their powers of observation be increased,—a result too little thought of in the work of training children. If this work is properly done, the children will go through the world with their eyes open and with minds eager to gain new ideas.

N. B.—As soon as the children know the object and can call its name at sight, judging from its peculiar characteristics of form, size, color, etc., the printed or written name of it should be put upon the blackboard in neat, distinct letters, and impressed upon the eye until the name can be easily called at sight. This exercise should be repeated until the first sight of the object will call to mind both the oral and the printed name, and also until the sound or sight of the name will call to mind the object. In this way the name of every new object, or the word-sign of every new idea, should be learned. Just as soon as possible all pupils should have a little blank-book in which they should be taught to write or print all new words, so that they may read them over by themselves, or in the class, until they are fixed in the mind.

It would add to the efficiency and pleasure of this exercise if each pupil had a separate drawer or box in which could be deposited his own collections, so that they could be occasionally reviewed. Every child should be instructed to bring in, if possible, some new thing, each day, which has not before been presented to the class.

This exercise will be an excellent substitute for, and in advance of, Froebel's gifts, for there is hardly a limit to the amount of instruction and knowledge which may be imparted in this manner. It makes the children familiar with the characteristics and names of common things, both to the ear and eye, and greatly increases their vocabulary. Half or three-fourths of an hour daily, for the first ten or twelve weeks, should be spent in these and similar exercises. But the teacher should be trained, and must specially prepare herself for this work. In fact, all special object-lessons and experiments may be brought into this exercise, when the children should be taught to exercise their own powers and find out *new* things by themselves.

Third Exercise. To prepare the children for gaining knowledge from books they must learn to read. To acquire this most valuable accomplishment, the children must be made familiar with the sound-elements of words, and with the names of the letters and the combinations of letters which represent these sound-elements. (Here seems to be an opportunity to put in a plea for a reformed phonetic alphabet.) Even with our imperfect alphabet, the facility and readiness to *call* and *form* words correctly depend very much upon the degree of perfection with which these sound-elements and their representatives are mastered.

To obviate and overcome as many of the obstacles presented by our imperfect alphabet as possible, and to provide a more expeditious method of learning to read than that of any of the partially phonetic methods, which require the learning of two alphabets instead of one, it may not be out of place here to at least recommend a plan which has been tried and fully proved, by which the sounds and letters used in word making can be so learned and mastered as to avoid many of the absurdities and contradictions which are so troublesome in the usual methods of learning to read.

THE PLAN.

1. The first part or step of this plan consists in carefully selecting twelve short, simple object-words which contain all the letters of our alphabet, and require twenty-four of the elementary sounds to form them; but no one letter in these words represents more than one sound. The mastery of these twelve words will enable the children to learn twenty-four of the elementary sounds, and the names of all the letters, phonetically; and they learn also to distinguish the sound of a letter as having nothing to do with its name, so far as uttering words is concerned. This device serves very many of the purposes of a strictly phonetic alphabet.

The following object-words are used: viz., *cab, lad, hen, fox, jug, wing, yak, map, quill, rod, vest,* and *adz.* No letter in any of these words, except *u* in quill (equal to *w*), has more than one sound. In mastering these words, as should be the case in mastering any new word, the first thing is to see the object, or its picture, represented by any one of the words, and learn all that is necessary to be learned about it, making it an object-lesson. When the children can call at sight every one of these twelve words, and understand its meaning,—or when the first sight of the object, or picture, will call up its word-sign, and when the word-sign will call up the object, — then the teacher may proceed to analyze the sounds in each word. First, she should pronounce the word distinctly, giving every sound in it, and then require each pupil to do the same, as perfectly as possible. Second, she should proceed to give each successive elementary sound, and then require each pupil to do the same until he can enunciate each sound in each word, in its order, without the teacher's aid, and then point out any letters which are not sounded, or give the silent letters.

The twelve words are all monosyllables; but if, afterwards, new words of more than one syllable are to be learned, each whole word should be analyzed,—first into its syllables; then the sounds of each syllable should be enunciated and articulated, and finally all the syllables pronounced again with distinctness and proper accent. Of course the meaning of each word is to be taught *objectively*, in all cases, before it is analyzed. This process pursued continuously will secure the perfect enunciation and articulation of all elementary sounds, and the proper pronunciation of words, without the aid, afterward, of any elocutionary teachers.

2. The second step in this plan consists in making the pupils familiar with the names of the characters and combinations of characters which are used to represent the elementary sounds. This step is essential, though of small importance comparatively, for the names of letters are of no use in learning to read.

To teach the names so that the pupil shall not confound them with the sounds they represent, the teacher should first enunciate the first sound of any word distinctly, and then give the name of the letter or letters which represent the sound by telling the pupils that each letter, like each little boy, has its own name. Then the teacher may print or write, neatly, each letter upon the board and give its sound again. Then the pupils should be required to give, first, the sound and after this the name. This process should be followed with every one of the words, and repeated until every pupil has become familiar with all the names and sounds.

When a new word is to be learned the pupil should never be allowed to give the names of the letters, but the sounds they represent, before calling the word. As far as possible children should be required to call words at sight, but when unable to do so they must be trained to give the sounds which the letters or combinations of letters represent By this process they will generally be able to give the proper pronunciation of the word, which they can never do by giving names alone. After a few lessons of this kind upon the twelve words, the children will have learned all the names.

3. The third step in this plan consists in making the children familiar with the remaining sixteen or seventeen elementary sounds. They have already learned to give the names of all the letters; but as some letters represent more than one sound, and as some sounds are represented by combinations of letters (because of our defective

alphabet), the pupils must be made familiar with the various sounds of each letter and the combinations of letters. To accomplish this work sixteen other object-words are selected, which are to be learned and analyzed in the same manner as the first twelve, except that there are no new names of letters to be learned.

The remaining sounds are represented in the following sixteen object-words. The monosyllabic words selected are: *Cake, ball, car, deer, pipe, rope, church, spoon, foot, thumb, scythe, ship, rouge, boy, cow.* When the pupils have thoroughly learned the meaning of these twenty-eight words objectively, and can call them readily, at sight, in print or script,—when they can analyze them by giving distinctly all the elementary sounds, and the letters or the combinations of letters which represent the sounds, and when they can readily point out all the silent letters,—they are prepared for the future continual practice of calling new words by sounding the letters, simple or combined, which represent the sounds in them, and by giving the names of letters, used or silent. By this time the most formidable difficulties in the way of learning to read will have been overcome, and the pupils will have gained considerable skill in finding out how to call new words. But these exercises must be continued regularly until the pupils have become familiar with all the common words of life; and it must not be forgotten that every new word must be learned objectively or by illustration, so that they may always know its meaning and use.

The length of time necessary to accomplish the above work should not be over six or eight weeks, and it may be less.

4. The fourth step in this plan consists in making the pupils familiar with the common order of the letters of our alphabet, and with the capital letters. Various devices may be adopted to secure this end, but none better than a chart, or a neat script or printed representation upon the blackboard.

5. The fifth step consists in combining words into sentences, so as to train the children to gain the meaning and use of words, relatively, and furnish them test exercises in calling words at sight. These exercises really begin the work of learning to read, and must be continued in some form, with charts, books, or with printed or written exercises upon the blackboard, during the whole course of elementary training, so that the children may gain the ideas and meaning of all kinds of sentences as readily as of words and pictures. At first the sentences should be simple, and they should always contain some useful idea. Then they may be modified by words and clauses as soon as the pupils can comprehend them. After this, compound and

complex sentences may be used. Reading charts and primary readers should always be prepared upon the principle herein recognized, because it is in accordance with the law of mental development.

6. The sixth step, which is necessary to make children acquainted with all the visible signs usually employed to make our written or printed language, consists in making children familiar with the common method of representing *numbers*, by the use of the seven letters of our alphabet, I, V, X, L, C, D, M, in connection with the Arabic characters, 1, 2, 3, 4, 5, 6, 7, 8, 9, 0. Simple devices, and frequent exercises upon charts or blackboards, will very soon make children familiar with these signs. Whenever lessons or pages are indicated by these signs, children should be required to read them until they know them at sight.

7. The seventh and last step in learning the signs which are used to represent written language, consists in becoming acquainted with the *marks* commonly used to indicate the kind of sentences and *pauses* by which the reader may be aided, through the eye, to comprehend the meaning of the language used. As they are essentially artificial aids in comprehending the meaning of language, the pupils should learn, at least, their *practical* use; and be able to recognize them at sight. Every reading exercise will furnish examples for practice. The punctuation chart, or a representation of the characters upon the blackboard, should be frequently used until these marks are learned.

When the principles embraced in the *seven steps*, heretofore indicated, are thoroughly mastered, the pupils have learned the meaning and use of a *large number of words*, and of the *elementary sounds* and the *names of the letters*, and the combinations of letters used to represent these sounds; they have also learned all the other signs used in written language, and have learned to acquire the relative meaning of words in sentences. Besides all these important and unusual acquisitions, the pupils have acquired an ability for making out the pronunciation of most new words without the aid of the teacher, or by a few suggestions from the teacher, from time to time.

To accomplish the work above indicated, not more than twenty weeks, of five days each, with two exercises daily, of about twenty or thirty minutes each, are required by a skillful teacher.

[To be concluded in next Number.]

CHRISTIANITY, NOT INTELLECT, IMPERIAL.

BY REV. WILLIAM M. THAYER.

We hear and read much concerning the "Imperial Power of Intellect." The theme is one of fundamental importance in education: for, while intellect, in its grand career, is royal indeed, it is by no means *supreme*. As the sun is the center of the solar system around which the planets revolve,—

> "Forever singing as they shine,
> The hand that made us is divine,"—

so Christianity is the centre of the moral world, around which education, freedom, and all the other satellites of true civilization perform their majestic orbits. Put one of the planets in the place of the sun, and the harmony of the planetary world is utterly destroyed, and the earth itself, on which we dwell, goes rushing into "chaos and dark night." Put education in the place of Christianity, and the harmony of the moral world ceases forever,—

> "And darkness, doubt, and long despair
> Reign in eternal silence there."

Nevertheless, a class of modern philosophers teach that intellect, rather than Christianity, is imperial. This is expected of "empiric philosophers," of either sex; but we refer rather to a class more directly engaged in the education of the young. It is the same now, substantially, as when Paul preached at Corinth. Learning declined to accept the Gospel even as its equal. Barnes, commenting upon the fact, says, "There is something about the pride of learning and philosophy which usually makes those who possess it unwilling to sit at the feet of Jesus." Christianity requires that their "learning and philosophy" should be laid upon its altar, in order to accomplish the most good: and this they are unwilling to do. They believe that intellect can take care of itself, and its votaries, also; and that really its true mission is separate from and superior to Christianity. The latter makes intellect a planet, but they want to make it a sun. They are quite willing that Christianity should revolve around intellect, and would not object to its existence upon this earth so long as it moves in that orbit; but they are not willing that intellect should revolve about Christianity,—that is too humiliating. It is precisely here that education will fail, if it ever fails, by declining to become an agent, or potent force, in the plans of the Christian religion. There is no possible way for learning to do so much for the human family as it can by putting itself under the direction of Christianity.

Again, there is a strong feeling abroad that education will save the Republic. Were the term 'education' used here in its broadest and best sense,—to embrace Christian culture,—that would be true: but it is used in the narrow sense of intellectual development, — national safety in schools. Making more of the sentiment than was ever intended,—"the safety of the Republic is in the intelligence of the people,"—they rest the hope of the Nation in institutions of learning. This is a singular conclusion; since schools alone never saved any nation yet; and the record is well known. The most brilliant intellectual opportunities of Greece and Rome did not save them from corruption and overthrow. They were more unsaved by their mental splendor than they could have been without it. Their corruption, shame, and ruin were more complete in consequence of great talents and high culture divorced from moral principle. An educated giant is a giant curse, without moral character; and it is worse with a nation than it is with the individual. If there ever were an instance of schools saving a nation, in all the ages, there would be some reason for attaching this high-sounding title "imperial" to intellect; but since there never was such an example, and learning has only *helped* Christianity do it, the claim is preposterous.

There are well-meaning, but unthinking, people who believe that Christianity should have nothing to do with the State, and, therefore, nothing to do with the schools which the State supports. It may meddle with *private* schools as much as patrons will, but with the great public affairs of the land it must not interfere. In domestic and social life it may be very well; in the church and house of mourning, better; and they have no objection to its influence in assisting the trader to measure tape or weigh tea honestly, but keep it there, within its appropriate sphere. There is too much "dirt" in politics for it to touch them, and too much dignity in legislation for its dictation. Hence they would exclude the Bible from schools and Congress, and limit prayers to domestic and Sabbath altars.

Yet, again, some parents appear to believe that a thorough mental education is all their children need to make them successful in life, and win the confidence and respect of men. They would not see them immoral by any means, nor do they anticipate any such results.

They appear to think that education alone insures them against moral mistakes and shipwrecks. The son comes out of college, and the girls, too, with an air that seems to say, "I have been through college; show me the deference which this fact demands; give me the place which this fact ought to assure." We say there is a class who thus indirectly proclaim to the world that they believe in the "Imperial Power of Intellect." It may be a small class, and a brilliant one, too,—so much the worse for them! Did they fully accept the Bible idea, that education is subordinate to Christianity, they would not graduate with as little thought of personal responsibility for talents and opportunities enjoyed as children possess, nor be so utterly oblivious to the motive of living to do good in the world. We have seen some of this class canonizing their intellectual idol, as Thoreau in the Concord woods, and pouring out the incense of admiration and praise before it as if it were the part of intellect to shine like the fire-fly, and perish! It is one of the most pitiable spectacles in Christendom,—Thoreau in his forest-cabin! Grant that he was a "child of Nature," and a "fine, talented man,"—what of that? So much the worse for the possessor in this world of ours, where every day calls for philanthropy, and every hour for self-denial and Christian work! Put Gabriel himself into the Concord woods, and shut him up within himself, month after month, when he ought to wing his way on errands of mercy to the wandering and lost of earth, and even he would be an angelic failure. When an angel fails, his failure is mammoth compared with that of a man. When a Thoreau fails, his failure is greater than that of common mortals. If he had possessed but one talent and buried *that*, his sin would have been great enough; but to possess five, and bury them all in one hut in the Concord woods, is mountainous sin. What though he "holds sweet communion with nature"! He abjures communion with the highest form of nature that God bestows,—a human soul! He deliberately forswears his kith and kin, and refuses to "rejoice with them that rejoice, and weep with them that weep." And, worse still, he denies the claim of personal responsibility to God and man, and his bounden duty to do good to his fellows, and make the world better by living in it. There could not be a more selfish and shriveling view of human life than this,—brought down almost to the level of the conies and insects he was said to tame. Great business that,—charming the denizens of the forest, and neglecting the claimants of his own race! Throwing away intellect and time upon hares and pismires, when the wide world of want and woe was open before him, calling for help! Plying his little canoe on Walden Pond, when, as he said, he "got the world by the nape of the neck and held it under, in the tide of its own events, until it was drowned, and then let it go down stream like a dead log"! Horrible for a human being who might become a power for usefulness in the world! A poor, conceited, selfish, miserable Jonah, running away from duty, without the prospect of a whale's belly for a school-room! No wonder that he could write, "The whole enterprise of this nation is totally devoid of interest to me. There is nothing in it which one should lay down his life for, —nor even his gloves." Verily, he told a plain truth when he said, "I am something to him that made me, undoubtedly, but not much to any other that he has made."

Once more, large numbers of people are so fearful that sectarian bias will be given to religious instruction in schools, that they deny any place to Christianity in popular education. They think that the absence of all Christian instruction is preferable to the presence of the smallest amount with sectarian tinge. "No matter what a man believes, if his life be right." "The light of nature and conscience are sufficient to guide." "If a man be sincere, no matter what he believes." "At best the teachings of Christianity are uncertain." These are some of the maxims that influence men to make education superior to Christianity. The popular sentiment is more or less affected by them; and we submit that the fruits of it appear in the fact, that many graduates of American colleges array themselves substantially against the Bible. Many others put a very light estimate upon Christianity and its institutions, and seem to take pride in the declaration that they are not under any such "yoke of bondage" as the Gospel imposes. Quite a number of the late graduates of a New England college announced to the world that they were followers of Ingersoll. Almost any Christian man, who is a college graduate, can recall facts respecting his own class which confirm the foregoing statements.

We are not claiming that there is more of a disposition to divorce education from Christianity *now* than there has been for fifty years, and more; nor that it is peculiar to the American system of instruction. Indeed, we believe that there is increasing recognition of the claims of Christianity to superiority over learning, just now, and that educators and leaders of thought in our country are feeling, more than ever, that the founders of New England were right in making the meeting-house and school-house, like the Old and New Testaments, two parts of one harmonious whole. It is quite evident, also, that the educators of America, as a class, are in advance of those in Europe upon this important subject. Sentiments adverse to the imperial power of learning obtain to considerable extent in American institutions; but, in Europe, their sway is powerful. Dr. Thomas Dick said, as long ago as he wrote his *Improvement of Society*, "In the academical prelections on physical science, in most of our colleges and universities, there appears a studied anxiety to avoid every reflection that wears the semblance of religion. From the first announcement of the properties of matter and the laws of motion, through all their combinations in the system of nature, and their application to dynamics, hydrostatics, pneumatics, optics, electricity, and magnetism, the attention of the student is kept constantly fixed on secondary causes and physical laws, as if the universe were a self-existent and independent piece of mechanism; and it is seldom that the least reference is made to that Almighty Being who brought it into existence, and whose laws and operations are the subject of investigation." Later than Dr. Dick, Mr. Ruskin, who deserves to be classed with Hooker, Jeremy Taylor, and Herbert, as a Christian philosopher, said, "Our system of European education despises religion. There is much talk and much teaching in all our academies of which the effect is not to bind, but to loosen, the elements of religious faith. Of the ten or twelve young men who, at Oxford, were my especial friends, who sat with me under some lectures on Divinity, or were punished with me for missing lectures by being sent to evening prayers, four are now zealous Romanists, a large average out of twelve; and while thus our own universities profess to teach Protestantism, and do not, the universities on the continent profess to teach Romanism, and do not,—sending forth only rebels and infidels. During a long residence on the continent, I do not remember of meeting with above two or three young men who either believed in revelation or had the grace to hesitate in the assertion of their infidelity."

But, without pursuing this phase of the subject, there are several cogent reasons for making Christianity, rather than learning, imperial.

1. All things belong to Christ in the Divine plan. "All things were created by him, and *for him*." All that we behold in Nature,—oceans, hills and vales, forests and fields, the sun and starry firmament, angels and men,—was made for Him! All that we behold in Providence,—change, revolution, progress, government, liberty, science, art, and literature,—all are used to build the kingdom of Christ. We do not behold the real glory of earthly things until we discover their place by embracing this sublime truth in the Divine plan. With the telescope the student may sweep the firmament, beholding

a hundred million suns, each the center of a mighty universe, and explore the realms of space until imagination tires, and his soul pauses in awe before the grandeur of creation; and still he fails to comprehend the true mission and glory of these works, until, like the sweet singer of Israel upon the hills of Judea, he reverently lifts his heart to God, impressed by the Divine uses which they subserve, with the truly Christian thought, "When I consider the heavens the work of thy fingers, the moon and the stars which thou hast ordained; Lord, what is man that thou art mindful of him, and the son of man that thou visitest him!" Man, with all his endowments and acquisitions, is insignificant, except as he derives importance from the position God has assigned him among the works of creation. He is of more consequence, with his learning and accomplishments, in the service of Christ than he can possibly be elsewhere. In his greatest progress he cannot advance beyond his Master, nor can science advance beyond the Bible. "After all the gigantic strides which she has made, and is still making, science has found it impossible to leave the Bible behind. However deep she has dug into the surface of the earth, and however high she has climbed to build her nest among the stars, she soon finds that the Bible is close at her side. Nay, more: when she has taken the wings of the morning and said, "I will dwell in the uttermost parts of the sea," and when she has found some far-off island, in some remote nook and corner of the universe, which she is about to call her own by the right of prior discovery, she finds, to her amazement, that the Bible has been there before her,—the pioneer and the very prophet of discovery!"

Christianity claims every foot of our National domain; and she will possess it. Her faithful agents penetrate where commerce shrinks from going, and, kneeling upon the uncultivated earth, pledge to God schools, domestic altars, order, public tranquility, progress, mental and spiritual growth, that other New Englands may be carved from the great empire of our West. She commands the heart of the Christian and the brains of the artisan to dot the "New West" with houses of worship, institutions of learning, halls of legislation, warehouses of commerce, workshops of mechanics, and every other facility of human progress, that shall make the "Golden Gate" as Plymouth Rock. Verily, Christ's title to the heads of men is as clear as his title to their hearts! He came to destroy the "works of the devil," of which *ignorance* is conspicuously one; and the weapon of its destruction which he wields is Education.

2. Christianity stimulates Intellect. Schools and colleges spring up and multiply in its pathway,—nowhere else. There is the most

intellectual power in those parts of our land where there is most religious power. New England is preëminently religious; she is preeminently scholarly, too. She supplies other portions of our land and other countries with educators as she does with preachers. Proclaiming that "wisdom and knowledge shall be the stability of the times," she raises up scholars as well as Christians; and, next to her Christian preacher, her Christian scholar is her most powerful agent.

There are hundreds of ministers and other professional Christian gentlemen in our land who never would have sought a liberal education but for their consecration to Christ. The thought was not entertained until they became Christians, when a sense of personal responsibility, begotten by the Spirit of God, awakened a strong desire to make the most of themselves for future usefulness. What but a new impetus given to the mental faculties of John Bunyan, an ignorant, profane, degraded tinker, by coming to Christ, could have made him the wonderful man that he became,—author of the most unique, fascinating, and finished allegory in the English language? What but this could have changed the corrupt hearts of Agustine and John Newton, at war with home and kindred, and all that makes manhood worthy of the name, and transform them into useful citizens, kindling their intellects into flaming torches to be borne around the world?

3. Christianity requires the education of the masses. There are no free schools where Christianity is not. Even where Christianity exists in a corrupt form, free schools cannot exist. When slavery was tolerated and fostered in our Southern States, there were no free schools. Southern policy was not to plant the school-house beside the house of worship. Free schools are antagonistic to slavery. Ignorance forges chains; education breaks them. Christianity demands the education of the negro, but slavery says, "Nay, then he is no longer a slave," As soon as Christianity educated the American people to know, feel, and swear that every man, black or white, should be free and taught, and they were willing to fight for it and die for it, slavery ceased to be, and free schools began to rise upon its ruins.

Education, of itself, is selfishly inclined. It fosters the spirit of caste. In the brilliant ages of Greece and Rome, when intellectual culture was at its zenith, few only were educated; the masses were ignorant and oppressed. Education must be Christianized. The Christian spirit only will give education to every child. It is the necessity of the hour. It is not necessary to multiply great talents to secure the peace and prosperity of our republic; but it *is* necessary to educate the masses. Our greatest peril lies in untaught minds; and without the stimulus and aid of Christianity that peril will never be removed

4. Christianity encourages the education of the young to the utmost extent of their abilities. It would develop the best there is in their three-fold nature. It is satisfied neither with partial education nor with the training of the intellect at the expense of the heart; nor *vice versa.* It counsels the harmonious culture of all the powers, not so much for a particular vocation as for any position Providence offers. The true scholar makes the most of himself possible, and this is precisely what Christianity demands. Some modern philosophers say, "Accept nothing you do not understand,"—advice that would make human creeds very short; but Christianity claims that the best growth of humanity, as well as of religion, depends upon studying and accepting what the mind cannot now understand. The young would make very little progress in mathematics, astronomy, and other branches if they ceased to study where they failed to comprehend. They may imagine that their tasks are onerous, and perhaps unreasonable, but Christianity bids them remember that they are under obligation to do that for which, in themselves, they have not present ability. It is the only law under which they can develop into true manhood and womanhood. Christ commanded his disciples to feed the five thousand when he knew they could not. "Give *ye* them to eat." "We have only five loaves and two fishes," they replied; "we cannot do it." Still he commanded them to make ready, as if they possessed sufficient food for the multitude. The scholar must pursue astronomy as if the whole system of Copernicus were at his command, and, by-and-by, it will be. In this way boys and girls grow to greatness and goodness,—just by studying what they do not understand, and striving to do that for which they are not yet equal. Under this Christian plan their faculties are developed to their utmost extent, and they make the most of themselves possible.

THE STUDY OF HISTORY.—(I.)

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The scientific method which distinguishes nearly all branches of modern investigation has been, till recently, conspicuously absent from historical research. During the past century it has been applied to all sciences with highly successful results, both in classifying existing knowledge and in leading to work of a more exhaustive character than any which had preceded. Many new facts have been discovered; new laws have been deduced, and definite knowledge has replaced theory. We have today, as the result, the exact sciences. Recognizing that the immutable law of cause and effect regulates all life, the principle which controls all existence is known, and it only requires a sufficiently broad knowledge of facts pertaining to the class under consideration to develop the distinct character of an exact science. We have an universal and absolute principle as a guide. Then, when the facts of a certain class are understood, they can be arranged with exactness, and results predicted with certainty.

In most physical sciences it is comparatively easy to learn the precise nature of objects; hence, easy to classify and reach exactness But, with every advance from that which is purely material to that which is immaterial, new factors, not readily understood, appear. It becomes continually more difficult to reach the final analysis, and the element of doubt increases. In chemistry, formulæ are susceptible of distinct proof. In medicine, certain conditions of the patient are unknown, and hence absolute exactness is impossible. In mental and political science, unknown quantities reach their maximum. The element of uncertainty is greatest, and it is impossible to reach exactness. In these cases, complete knowledge is unattainable. Many laws of mental action are not understood. Results depend upon many causes which cannot be traced. The passions and the prejudices of men are factors of the highest importance, and, at the same time, the very ones least possible to discover. It, therefore, follows that researches which deal solely with men in their multiform characters are liable to the greatest and subtlest errors. If we regard contemporary events only, we discover our judgments are often highly erroneous because of our ignorance of motives and circumstances. When we turn to the past, the unknown quantity has increased in proportion to the distance of the time and the incompleteness of its records. The chances of error are far greater. It is thus impossible for history to become an exact science.

Fortunately, however, we do not require absolute exactness from history in order to make it valuable, though its worth necessarily increases with the greater certainty of correct premises for our logic. Enough is known of human motives and character, and enough of the facts of all epochs of much importance to us, to enable us to reach generalizations of practical usefulness. In a department in which premises may be faulty and knowledge incomplete, it is the more important to have correct method. The results attained, when precautions are observed, possess a high value. They have long been, and still are, underestimated. Historical writing has, as a whole, made less advance than any kind of scientific record. It is more difficult; but it has not received the same attention and method. It is not now what it should be, nor what it is destined to become in the not distant future.

History has been treated as a record of events chronologically stated, and more or less connected, according to the ability or philosophical bent of the writer. Unity and perspective have rarely been preserved. Historical works have been compilations of facts whose salient features have been events which appealed to our passions or sentiments, rather than a record of progress. The result has been volumes which are statistical rather than philosophical, and which, in the final analysis, are nothing more than diffuse manuals. That such works cannot possess the high value which is intrinsically due to history, seems patent. That they have been the prime causes why history has not been an inevitable and invaluable part of all systems of education, and is not now held in the highest estimation, is obvious. Had historical writing reached that degree of perfection which it is slowly approaching, history would not, for so long a time, have been considered an educational ornament, rather than an educational necessity. It would not have received such cursory treatment in the schools as has been its lot; it would have been given other than the last and least important place in college curriculums, and, when taught, it would not have been in a perfunctory manner.

The prevalent idea of history has worked injury, because it has prevented it from assuming high rank in all courses of study. It has relegated it to an inferior place. It would seem unnecessary to offer any demonstration that a knowledge of the habits and deeds of men, and the result of their acts, would be of value in enabling us to foresee the result of actions of our own; but the course of educators of all classes refutes the supposition. This principle is self-evident. The more perfectly a man knows what has happened in the past, and the reasons why all events have occurred, and understands what causes have produced certain results, the better able is he to see what will be the result of contemporary public or private action. The scientific study of history is the only means by which this can, in any measure, be done.

History may be defined to be a logical record of events showing how, through the irreversible sequence of cause and effect, every event of the past is the logical and only possible result of previous causes, which, in their turn, are the effects of causes previous to themselves. It is the study of humanity, at once the most difficult, profound, and exhaustive of all studies. The great errors which are characteristic of its past are lack of unity and perspective. It appears as if the fundamental historical conception had been absent, and, lacking this, groupings and arrangements have been illogical and arbitrary. Presupposing sufficient knowledge, the first requisite of an historic writer is a conception of the unity of his subject, so that it stands before him in its totality or completeness, representing definitely certain principles or ideas which its narration will exemplify. The second, and equally important requirement, is a mastery of the perspective of the work, so that events may receive their proper position, and every cause be so placed that its influence on the future, in determining results, may be grasped readily.

History other than American, and previous to the last few centuries, has dealt with periods of which comparatively little was known. Information has been chiefly legendary, and such data as existed have been incomplete. Logical reasoning can proceed only from well-defined conceptions. In the absence of exact knowledge such conceptions are impossible, and philosophical history, hence, cannot be written. Some few writers have attempted a strictly philosophical treatment, but they have generally failed, such failure being due to three causes; viz., imperfect conception, insufficient data, or the vastness of their tasks. It is evident that the longer a period selected, and the greater detail with which it is treated, the more difficult it is to preserve the thread of discourse, throwing into relief only determining causes, and preserving a grouping of the whole, which gives character and individuality to the epoch. It has been the custom of historians to deal with remote times. This course has been rendered necessary because man preserved no records of his actions until he acquired a good degree of civilization, and even then his first records were fragmentary and legendary. It thus became the duty of historians to discover and reveal to civilized man the conditions and customs of his ancestors. With perfecting civilization and more complete knowledge of the past, the necessity for historians to devote themselves the more to distant times diminished. Events of more modern periods have been chronicled, though those which approached contemporaneous times have been carefully omitted, because human judgment is most likely to be correct when acting upon that which is so distant as not to effect us, if, at the same time, our knowledge is complete.

The facts of the past of which it has been easiest to learn have been those which were external and striking. The earliest history was heroic; the latest is constitutional. From the one to the other there has been a slow advance. The earliest history comes to us as legend, stories, and songs of popular heroes. Then come written accounts, first of individuals, then of nations. In all these the outward life alone is regarded. Details are of battles, and of the lives of princes and kings. There was, for long, no thought for the welfare of the people. This tendency was too powerful to be easily eradicated. Even now no historians venture to record a war by its salient features and results only. It is given with a detail which appeals to our heroic natures, and, by occupying time and attention far beyond what it deserves, judged by its results, it acquires a preëminence in our minds which cannot be justified by reason. In this method, great stress was laid upon facts themselves, while the irrelation and connection was overlooked. The result indicated no conception of unity, and showed no relationship of events. What perspective appeared was misplaced, for it brought into relief external and superficial affairs, and implied for them an importance wholly false. Contemporary historical writers are feeling the impulse of modern times. New methods are applied to historical work with promising results, and indications point to a better future.

Any historical work may be made valuable, though it deal with the externals of history, if unity and perspective are strictly preserved, because, if this be done, the sequence of cause and effect will appear. But the historian who deeply considers the unity of his subject will be led below the surface of events to meditate on active historical forces. He will then unconsciously discard that which is transient, and deal chiefly with developing causes. Study of the relationship of causes will lead to their perspective, or relative importance, and thus he will elaborate a scheme of history, which shows why that which has been has been, and which teaches invaluable lessons.

The value and importance of historical study has been greatly underestimated by educators and by the public. In schools, generally, it has received less attention than any other study, and, when taught, it has been in the most perfunctory manner. Any teacher, however imperfect his own knowledge, is deemed able to take the book and hear a few dates recited, and a disjointed sentence or paragraph repeated from memory. One or two elementary works or primers are finished when the pupil is sixteen, and thus the majority of children are informed of what the world has done before them. If a college education is added, the student is likely to be taught Roman and Grecian history. Perhaps he gets a taste of Ancient or Modern, or a glimpse at French or English; and, if he be extremely fortunate, he has offered to him a course of study on the discovery and settlement of his own country. That he is taught anything concerning the vital history of the United States, the period of our individuality and national life is in the highest degree improbable. He learns by inference, if not by precept, that history is an educational ornament; and if he be not an exception to the average of men, nothing occurs in the future to change his early impression.

Of schools in the United States higher than primary, and including chiefly high schools, academies, and preparatory schools, eighty per cent. report that they teach United States history; seventy per cent. report that they teach general or universal history; forty-four per cent. teach English history; thirty-three per cent. teach Grecian and Roman history; and a much smaller proportion teach the history of other nations, among which that of France is most prominent. These figures represent what the schools *claim* to teach. Experience, however, shows that in very many schools there are no pupils pursuing certain studies. The teacher is able to teach them, and includes them in his announcements; but it often happens that classes are not formed. History is a study often treated in this way. At least five per cent. must be deducted on this account from the eighty per cent. of schools claiming to teach history. These figures, then, mean that twenty-five children out of every one hundred learn nothing of the history of their own country unless from cursory and fragmentary reading; that thirty-five out of every one hundred learn nothing of the general history of the world; that sixty-one out of every one hundred learn nothing of the history of England, from whence came most of our laws, customs, and institutions; and that seventy-two out of every one hundred learn nothing of the great nations of antiquity, Greece, and Rome. The figures represent facts, and facts which are of vital importance when considered in relation to Republican institutions. Were such figures representative of the condition of monarchical Europe, they would be highly creditable. Applied to Republican America, they are disgraceful. This difference is based wholly upon the difference in the form of government. In Europe government has always been by a few, and is still chiefly confined to a limited class. In America government is by the people, and depends entirely for its purity and efficacy upon the honesty and knowledge of the people. It therefore follows that, if any considerable portion of the people are ignorant, an element of danger to free institutions is present.

The twenty-five per cent. of children who are taught nothing of United States history does not represent the real ignorance of the people. The figures mean that twenty-five out of every one hundred of our *school-going* children, between perhaps thirteen and eighteen years of age, are taught no United States history. When the number of children who do not attend school after thirteen years, and the thousands of ignorant immigrants who never attend school, are considered, it is probable that at least thirty-five out of every one hundred learn absolutely nothing of the history of the United States. If it be then granted that sixty-five per cent. of our children are taught the history of their own country, it remains to be discovered what that history is that they are taught, and how it approaches that desideratum of compact and logical knowledge which alone possesses active and permanent value.

The necessity of education to the permanance of free institutions has found expression in the United States in the establishment of a free-school system, with the avowed object of training our children for citizenship. Such being the object in view, those studies which give information most practical and easily utilized are required. The primary grades are limited to the three elementary branches. In grades more advanced, the pupil is taught that which is to fit him for his life work. What he then requires is a knowledge of elementary principles and facts, and a knowledge of correct methods of applying them, that he may have a reasonable prospect of reaching correctness in his conclusions. At twenty-one, the pupil has to do with constitutional questions. He must weigh and consider matters of importance, and reach conclusions from broad generalizations. In this republic there is no aristocracy of educated men from which rulers are chosen. Legislators rise from all classes, often from the most ignorant. Passionate and vulgar men acquire prominence by their unscrupulousness, and half-educated demagogues lead in crazy schemes of inflation and repudiation. The sentiment of the Czar of Russia is beyond question,—absolute government must be exercised by one or all; where one is absolute, the people require no learning,— he must be all-wise. Where the people are absolute, they require all learning,— they must be all-wise.

There has been discussion, of late, whether our school system has been the grand success it has appeared. That it has taught the bulk of the people to read and write is not denied; but whether it has accomplished its primary object, and formed good citizens, is seriously questioned. That it has failed, or fallen far short in this respect, seems evident when we consider the exhibition of ignorance and vulgarity which disgrace so many public men whose education has been gained only in the public school. Leaders are not worse or better than the people. An indifferent public sentiment produces incompetent public servants. A strict sentiment ensures a higher class. Public opinion has not yet recognized where the trouble lies. It devolves upon practical thinkers to point out the difficulties and suggest remedies.

It is not supposed that any representation that could be made, at the present time, would induce a discontinuance of the public schools, or any great modification of them. Nor would propositions looking to such an end be logical. On the contrary, before the public school system is discarded it should be brought to its most perfect development, and its utmost resources taxed, in order to secure from it satisfactory preparation for citizenship. The point here indicated, in which the present system fails, is the incomplete and inadequate teaching of history,— primarily of United States history. It has been shown that only about sixty-five out of every one hundred of our population have any knowledge of the history of our country. What the knowledge is which these sixty-five do possess will not be considered.

There are in print a considerable number of United States histories adapted to use in public schools and academies, in all nearly sixty. As elementary text-books, they serve their purpose creditably. Almost any one of them will answer for a child's first lessons, for it will give a brief and easy course in one entire history. Unfortunately, one of these books is esteemed sufficient for the study of our pupils, who are hurried through it, acquiring only a superficial view of facts, and nothing of causes and effects. In all other branches of study there exist graded courses, to carry the pupil from simple to complex thought. In history there is but a single grade of works, and those elementary. These books also suffer from a fault which greatly impairs their value, even as elementary works. Their treatment of the earlier and later periods of our history is wholly without relation to their relative importance. There are three periods in American history. The first, of discovery and settlement, is between 1492 and 1630; the second, of active colonial life, is between 1630 and 1776; the third, of revolution and nationality, from 1776 onward. Of these periods, that which is of most practical value, as bearing upon existing forms and conditions, is the third. The second period ranks next, while the earliest is of least moment. Such being the fact, a judicious writer would devote most space to the time since 1776, and proportionately less to the earlier periods. As a matter of fact, this division has always been reversed, and three-fourths of each work is devoted to the first two periods, and but one-fourth to the last one. From such a division the pupil infers a greater importance for the earlier times, and attaches little importance to the latest. If these elementary works were followed by others more advanced and philosophical, there would then be less cause for censure. The second series would deal with the first period with comparative briefness; with the second, at more length; and with the third, with a fullness sufficient to develop it clearly. As now used, these works are wholly inadequate to accomplish successful results. They do accomplish, in the main, that at which they aim; but what they aim at is soinsignificant that to accomplish it deserves no very high praise. The sixty-five per cent. of the children who study United States history acquire from such works the disjointed knowledge of a few facts; they learn that such and such men lived and died; that there were wars and riots; but nothing more. There is not shown there a living sequence of cause and effect controlling events, nor any evolution of national life. No event of the past teaches a lesson to the future.

By such courses of study, interest in history is seldom awakened. When it is, the pupil is very likely to go wrong, and select superficial works in preference to more solid ones. Inquiries are more frequently made by persons desiring to read history judiciously, concerning the selection of books, than by those attempting to pursue any other study. Suggestions for courses of reading often appear, and elaborate works have been written to indicate what books should be read with different ends in view.

It has been shown that about sixty-five per cent. of our children are taught something of United States history,—a few facts and dates which are soon forgotten; which appear bald and isolated when learned, and being so, are totally barren of results. A few pupils continue their studies through college, and thus have further opportunities for historical study.

There are in the United States, in round numbers, four hundred so-called colleges and universities. Of these institutions not more than thirty deserve to be called colleges, and not more than five are worthy of the title of university. Of these four hundred higher institutions, only seventy-five per cent. claim to teach United States history; fifty per cent. general history, and thirty-three per cent. English, Greek, and Roman history. It is hence clear that even in our highest institutions there is a great lack of historical teaching. On historical subjects generally, there are enough good and clear works adapted to the use of college students for text-books, or for reference in connection with lectures. But with United States history this is not the case. There is not a single book suitable for use as a text-book, and not a work of such a nature that it could be used without others for reading and reference. Three-fourths of the so-called colleges which teach history use the childish and elementary works already described. These institutions dwarf the intellect when they place such works in the hands of maturing young men. Such a course is disgraceful to education, and a reproach upon higher education. The remaining one-fourth do not pursue a much more creditable course. As there is not a United States history adapted to the use of college students, or which any well-informed person would presume to assert is suitable for them, there is no text-book used, and the subject is taught by lectures. These lectures generally relate to the settlement and colonization of the country, rarely coming down into this century. They close as their practical value begins. Effect is, however, produced in individual cases by stimulating the student to further work. A few institutions teach constitutional history. The course in such cases generally consists in the study of the English Constitution, by means of six or seven essays prepared by the student, on subjects given by the professor. These essays are discussed and criticized by the professor and class. Then follow four or five essays on United States history, treating of the settlement and early government of the country, and generally closing with the adoption of the Constitution. This course is good so far as it goes, but does not go far enough. It thus appears that the percentage of those who acquire a knowledge of American history is hardly augmented by those who pursue a college course. There are no data from which to deduce the number of those who ultimately acquire a good knowledge of the subject. It is probable, however, that it is less than five per cent. When college graduates of good standing acknowledge that they have never heard of Albert Gallatin, and do not know that there was ever a bitter struggle for the Constitution, one cannot wonder at the prevailing ignorance.

It is the fashion of to-day to turn toward historical studies, and ambitious colleges advertise courses in "History and Political Science." That such changes appear indicates a more healthful sentiment on the importance of political study, and likewise shows how disgracetul is the present condition. Did college courses give to history its true place, such a step would hardly be required. If the new courses are devoted exclusively to "History and Political Science," their products will be as unsymmetrical, in their way, as are the products of the now-historical courses. To-day, public opinion in America scoffs at scholarship. Americans are so confident in their strength, and in their ability to surmount all obstacles, that they do not heed any teaching. The masses do not generally believe that American history can be compared with that of any other people. Everything is supposed to be entirely new in this country, and not amenable to the laws which have controlled all others. There exists a scornful disregard of historical teachings, and a blind self-confidence. A complete misconception of the fundamental facts of the genesis of our national life obtains. A halo of glory surrounds the formation of the Constitution, into which few, even of the educated classes, have penetrated. It is believed that, after the Revolution, a constitution was quietly framed, and the government formed; political caucuses nominated candidates, and history moved serenely on. Nothing could be more erroneous than such a view. The country was on the verge of disunion and ruin before the people could be persuaded that a national government was needed. After the necessity was felt it required months to perfect the plan, and after it was perfected, nearly three years passed before all the thirteen States ratified the Constitution. The first two administrations of the new government were a formative period of great danger and difficulty, which, owing to the energy and ability of a few men, was passed in safely. Danger to the United States had by no means terminated with the close of the Revolution. The ten years succeeding it were fraught with the greatest peril Every influence was disintegrating. There was every probability of disunion and its inevitable consequence, a reversal of the result of the war.

Such being the facts stated in briefest outline, and such the common impression of them, it should be considered to what causes the erroneous impressions are traceable. Among them, three are readily discerned. They are: I. The self-confidence and self satisfaction of the masses; II. The failure of thinkers to grasp and utilize the facts of our history; III. The absence of such writings as would give the required information.

I. The self-assurance which characterizes Americans emanates, in great measure, from their achievements, and is not wholly baseless; but it is too often of that arrogant nature which is not open to reason. It arises, also, in an equal measure, from ignorance of ourselves and of our country. Americans do not know what United States history has been since the Revolution; but attribute to it as grand and heroic a character as that which attaches to the Revolutionary epoch. Ignorance of the real condition of the country after the Revolution, of the severity of the struggle through which it passed up to 1800, and of the undercurrent of our constitutional struggle down to 1860, aids in producing self-assurance. Were all the facts understood, it would appear that Americans are of like passions as other men. Having early learned that their political conditions were better than those of other countries, and that this fact was due to the ability of their ancestors, they acquired a belief that they were superior to other men. This was nurtured and dwelt upon until, in time, it was transformed into inherent superiority; so to-day it is felt by most of our people that they are better and wiser than other people because they are Americans.

II. There has always existed in the United States a scholarly class, whose acquirements compared favorably with a similar class in England. But the turmoil of American life, and the necessity for all to struggle for competence, have prevented the meditation and research necessary for the accomplishment of valuable work. Very few of American thinkers have been able to devote themselves exclusively to scholarly pursuits. Necessity has compelled them to give their best efforts to obtain a livelihood. Only by encroaching upon the hours which should have been given to rest, have they accomplished that which was dearest to them. The men who first turned their thoughts to American history found an open field. They began with the earliest times, and moved slowly onward. Their course has been so slow, and their work so complete, that we have several works of great merit covering the period prior to the present century. Historians have felt that to enter this century was to encroach upon the present. They have, therefore, only touched upon it lightly. No attempt has been made in any work of importance to pass the year 1821, when the "era of good-feeling" was at its height.

Previous to 1861, the Constitution was still experimental. Though under it we appeared to have become a nation, our political history was a contest over its interpretation. If one principle of interpretation was sustained we would be proved a nation, — if the other, then our nationality might at any moment disappear. Rebellion was the test of the Constitution. The theory of Jefferson was destroyed, and American nationality vindicated. The Constitution is not an experiment now in the sense that it was before the Rebellion. The period between 1800 and 1861 is now historical. The principle involved in the long contest has been settled. A new era is opening, in which social questions will stand side by side with constitutional ones, and, as the latter are definitely settled, will replace them. Prior to 1861 the same self-confidence which now exists characterized Americans. The government was thought too secure for rebellion to be possible. To-day no one deems possible a warfare on social questions,—a struggle between capital and labor. With the great lesson of sixty years so near us, nothing should be considered impossible. It is time to grasp the meaning of our history, and study its lessons.

III. American history has been made before all the world. There is no period of darkness for whose conditions we must allow upon legendary information. European civilization was well advanced, and English constitutional liberty had reached high development, before active colonization of America began. Every act of the new world was seen and recorded. All seemed so plain and clear that everyone must know it. When, at last, the struggle with England came, interest culminated in it. The Revolution was sufficient glory; the nineteenth century seemed too modern. History was being made,—it should not be recorded. The last sentiment possessed force until 1861, when the test of the Constitution came. The war settled the question of interpretation, and closed the epoch. It is time for a calm record of the first sixty years of this century to be made; they contain a deep significance to every American.

In a Republic, changes are so rapid that none can rely upon the apparent conservatism of any class. There is always clamor for something new, and there are always leaders for rash undertakings. With the settlement of Constitutional questions, social ones will take their place. A new struggle, and one never yet settled by any people, is urging itself upon us. The enormous inequality of wealth which our conditions present is not normal. It is highly probable that social questions will be settled in the United States. The greater elasticity of our institutions, and the free spirit of the people, make much possible which would be impossible in Europe. But before such results can be reached, the knowledge of the people and the culture of their leaders must reach a higher standard. Historical knowledge will be of chief value and, especially that of the United States, where already the greatest Constitutional questions of the world have been settled.

THE UNIVERSITY; ITS PLACE AND WORK IN THE AMERICAN SYSTEM OF EDUCATION.

BY EDWD. T. TAPPAN, LL.D., GAMBIER, O.

It is assumed in the statement of the topic that there is a system of education in America, and that the University has a place and a work in that system. The determination of the place will not be difficult if we can distinguish what is the proper work of the University, wherein it differs from other educational works, and particularly from the works of the College.

This distinction must be between things rather than between names. The corporate name affords no information as to the character of a school; we know many legally named Universities which hardly rank higher than grammar schools, and whose best work consists in preparing students for college.[1]

The distinction between College and University does not consist in the power to confer degrees. Several States have been very loose in their legislation on this subject; they have vested in inferior schools the power to confer all kinds of academic degrees that ever have been conferred, and to invent new kinds, such as were unknown to our forefathers, and are wonderful to us. In consequence, academic degrees have become of little estimation.[2] Men who are known to be learned, sometimes prefer to drop the titles of Doctor and Professor

Every academic degree ought to be evidence of some work accomplished by the graduate. Degrees are of different rank. In order that they may be respected as evidence of work done, there should be definitions as precise as possible of the various grades of work in college and in university. Then the baccaulaureate might be regarded as the collegiate, and the magisterial or doctorate as the university degree. Let credit be given to those schools which are working in this direction.

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[1] This fallacy of looking at the name alone was made by a distinguished college president, in an address to the National Education Association, some years ago. By adroitly arguing upon names he instanced the number of so-called colleges and universities in Ohio, for the purpose of making a point in favor of institutions supported by the State. In fact, there are about fifteen colleges in Ohio. The managers of other schools bearing the name of college or of university know as well as we do that they are misnamed, but this does not prevent their doing excellent school work.

[2] Much of this talk about "honorary degrees" is merely superficial. There is far more abuse in the way degrees are conferred in regular course. The baccalaureate is frequently given at the close of a rather slender high-school course. There are thousands of Doctors that have received the degree in regular course, who could not pass the examination for admission to a respectable high-school. They can neither write good Latin nor speak good English. There may be some that have received the *honorary* degree of Doctor who are as ignorant as these; if so, they are comparatively rare.

The only essential distinction between college and university must consist in the work done. College work is confined mainly to liberal education. (The sins against education, under the guise of this word "liberal," have scarcely been surpassed by those against human rights under the guise of liberty.)

The study of the liberal arts,—*honestarum artium cultus*, in which Agricola passed his boyhood and youth,—has these objects: to discipline the intellect in acquiring, preserving, increasing, and imparting knowledge; to free the mind from prejudice, to sharpen it for the detection of error, and to purify it for the reception of truth. A liberal course of study, however much it may vary from age to age,—and it must vary as the world makes progress,—always must have these ends. There should be some study of natural science; the eye must be taught to see, the ear to hear, the fingers to touch, and the soul to recognize the glorious apparel of nature and the sweet and solemn tones of her voice; the faculty of observation must be trained, so that law may be recognized as something else than chaos. There should be some study of pure mathematics, training the mind to exact thought expressed in exact words, and giving the soul an opportunity to bathe itself in knowledge that is absolutely pure,—a science in which the rules have no exceptions. There should be some study of man, his relations to nature, to his fellow-men, and to his Creator; his history, his past, his present, and his future. Then, preceding all these studies, and accompanying all and crowning all, there must be the study of language, which is the vehicle of all thought, the record of all knowledge, the ornament of every science, the salvation of every art.

Contrasted with the liberal is the useful course of study, which is to prepare men to be of use to their fellow-beings. Not but that the liberal education is useful in every sense of the word, but its immediate effects are in the good of the student; it is to him an end. Hence the contrast with other studies whose *sole* object is to prepare men to do good to others. The liberal education does this by first creating the power to labor; the useful courses are to furnish the special knowledge which constitutes the tools. Formerly there were three principal courses, having for their objects the healing of disease, the administration of justice, and the cure of souls; but in these days, nature is pursued with untiring energy, and her every force is made to serve her lord and master, man; and the courses of useful study are as various as the needs of humanity. Such studies belong to the university. They are properly termed useful. Every one of them is a means to some good end.

While the distinction between liberal and useful studies is clear, yet some studies partake of both characters. There comes into the lower schools much that is intended to be used in professional or other work; and there are always in the university many students who are pursuing either the classics or the sciences for the pure love of knowledge. Nevertheless, the essential difference between liberal and useful remains, and must remain as long as education is a science. This distinction nearly divides the college from the university work. The college education is almost exclusively liberal. The university education, in addition to the philosophical course which consists of liberal studies, includes all professional studies, all the sciences.

In the university work, courses of study are elective. Since every student may be assumed to be gaining knowledge for a particular kind of useful labor, election is necessary. When this general truth is taken as a premise from which to infer the simple converse, the argument is fallacious. It does not follow that a school which allows entire freedom in the election of courses of study is necessarily a university. The proposition is not stated in that plain way,— sophistry is not usually clothed in simple attire,— but some teachers appear to believe in their hearts that freedom in the election of studies goes a great way toward making a university.

Some have gone to the opposite extreme, and hold that in the college course there must be no election of studies. Without admitting this, the discussion of which would be aside from the subject, too much freedom of election, as allowed in some schools, is destructive of right liberal education, without which no one ought to enter a university. A liberal education ought to include the four elements above stated,— nature, mathematics, man and his work, and language. To allow a selection which omits either one of these, makes a course which is not general but one-sided. Such an education is not liberal but contracted. Ordinarily that particular department of study which a student deserts is that which he most needs. With no adequate general preparation, he wishes to pursue a course which he thinks will be useful in his future business or favorite science. If such a man is indulged, he is apt to be a failure, narrow. For the sake of all true education, university studies, including elective courses preparing for future business, ought to be preceded by a broad liberal course. As some of the better colleges have courses, the last year of which is part university work, free election of studies in that year may be proper.

There is now in this country a great deal of university work; much is done in colleges, and much by the better professional schools. Those professional schools which admit students with no adequate general or liberal education, can hardly be said to be doing anything fit to be named in a classification of schools. Also those few great schools where original research is made in order to increase knowledge among men, are doing university work.

In view of these facts, the question arises: Is it desirable to increase the number of distinct universities, institutions which do true university work, and that alone? If it is desirable, then what can be done toward that end?

The opinion is gaining, that the general or liberal educational work and the professional or special educational work would both be benefited by a separation. This may be effected either by a separation of schools, or by some line of demarcation if both university and college work are done in one school. Whenever this is done, there should be a corresponding graduation, the baccalaureate degree for the college course, and the degree of Master or Doctor for a certain amount of university work. Within the last thirty years great additions have been made to the regular course in many colleges. This increase of scientific and classical study has not hastened the organization of distinct universities. Many of these colleges which do some university work are so situated that they cannot afford to give up either the beginning or the end of the course, and there is no reason to expect any such action. If those colleges where the general education is less than the whole course would separate the liberal or college from the university course, and give the baccalaureate degree to the former, it would be a step toward the separation of things which are in their nature different. This, however, is only a matter of organization, and not the essence of a university.

In order that good university work may exist, two things are essential,— teachers and students.

The teachers must be among the most eminent in the world in their several branches of knowledge. The number of such men in this country is not great, in proportion to our population, but it has increased of late years. A sufficient supply of such men is the first essential of good university work.

The rule to be followed in keeping up a college faculty differs from that which should govern in the university. In the college, the faculty must be full enough to teach all the branches of the course, for the college course fails if any essential part is omitted. It may be proper to select a college professor, the best that can be obtained at the time, and regard may be had as well to his skill in teaching as to his scholarship and scientific acquirements. In the university, on the other hand, only those should have a place in the corps of teachers who are eminent in their departments. A university should not attempt to teach all things. No one school can do that well. Better that the professor's chair in the *university* remain vacant than that it be occupied by even a second-rate man. Some schools are too hasty in their ambition to be universities. We laugh at the ridiculous bombastic college at Monohyppos, where one man does all the work of a full faculty,—but this is no more absurd than the university at Polyhyppos, which proposes to give thorough instruction in all the sciences, and in all the art and literature of ancient and modern times by the same team of professors who are engaged in hauling a body of under-graduates through, or over, the general college course.

The other essential for the existence of good university work is students,—real students. The student prepared by the liberal course of study must add to this a desire to master the professional or other course which he enters upon at the university. The number of students in this country who have this preparation and this wish seems to be quite limited,—but it does grow; there is a constantly increasing number who aim to become masters of their science. They cannot be satisfied by merely passing an examination. There is also an increase in the number of those who are studying ancient or modern classics, with a thoroughness that was rarely attempted thirty years ago. The number who go to Europe to pursue their studies in the great schools of science or art is increasing year by year.

All signs show that university work in this country must increase within the near future. Where the great schools will be located, whether the advance will be in the old schools that have done so much already, whether newer institutions may surpass any that now exist,—these are less important questions. The important thing is to recognize what must be the work of the university. If we can apprehend this definitely, we can help by removing some obstacles.

CHAIRS OF PEDAGOGICS.

REPORT OF COMMITTEE ON CHAIRS OF PEDAGOGICS IN COLLEGES AND UNIVERSITIES; WILLIAM T. HARRIS, *Chairman.*

To the National Council of Education:

Your committee beg leave to offer the following report touching the establishment of Chairs of Pedagogy in Colleges and Universities.

They would respectfully represent that while instruction in the history and philosophy of education,—called Pedagogics,—has been given successfully for many years in the Normal Schools established in the several States of this Nation, and a large number of professional teachers have been sent out into the elementary schools of the land from these institutions,—that, on the other hand, the colleges and universities of the country have, with few exceptions, furnished no instruction in these matters.

Your committee would further represent that, as a consequence of this neglect, the teachers who give the secondary and higher education in this country have generally come to their work without professional training and without a philosophical survey of the science and art of education.

Your committee would further represent that the educated directive power of the country, as it is found in its professional men,—the clergy, the lawyers, the physicians,—has by far the greater influence in the control and management of elementary education, as well as of higher education; and that an ignorance of the history and philosophy of education leads to many wasteful experiments and wrong tendencies, and often results in factious opposition to the best interests of the common-school system in the country.

Your committee would refer to the same cause the conflict existing in the system of higher education with regard to the course of study, —between the advocates of a strict adherence to the disciplinary studies—Latin, Greek, and the mathematics on the one hand—and the advocates of the natural sciences, modern languages, literature, and history, on the other hand. The true functions of these branches not being well defined, by reason of the fact that there is no profession whose business it is to investigate the question of course of study, it happens that the advocates of information-studies, or "modern" branches, show a tendency to neglect the classic languages and mathematics, and by this fact slight those studies which give the pupil insight into the forms and usages of modern civilization, which show him their genesis in Greek and Roman life, and which give him ability to analyze the manners and customs of his own time and see their presuppositions. It happens, too, that many of our best institutions are led to make modifications tending toward the union of disciplinary and information-studies, but often with quite unsatisfactory results; the information-study being mistaken for an equivalent instead of a supplement to the disciplinary study. Meanwhile, a great number of the higher institutions adhere to a course of study which makes little account of the chief developments, in modern times, in the fields of literature and natural science, and which clings tenaciously to a course of study in Latin, Greek, and mathematics without requiring a proper quota of information-studies with these disciplinary studies. The course of study in such colleges and universities accordingly makes slight account of the studies of common schools in its requirements for admission, and demands special preparatory schools with a narrow course of study; it postpones the conventional studies that furnish information regarding the modern world of nature and man; for example, it postpones English literature and general history and the sciences of nature until after the pil has spent from eight to twelve years upon such purely disciplinary studies as pure mathematics, and the life and language of the Greeks and Romans. A course of study carried for so long a time in these branches results in a deep estrangement from the practical world of the present, and partially destroys the disciplinary value of those studies by depriving them of application. This lack of harmony between the higher education and the common-school education your committee would refer to the fact that our colleges and universities do not give sufficient attention to the subject of pedagogy, practically and theoretically.

Your committee would suggest that the history and philosophy of education should not occupy the place of a disciplinary study in college, but that it is quite sufficient if the classes of the last two years of the course receive instruction for a few weeks each year in the science and history of education; the object being gained when correct views are inculcated as to the scope and importance of pedagogics, and the students come to see the possibility of overcoming, by means of correct methods, the difficulties that arise in school.

Your committee would therefore express their satisfaction at the recent movement toward the establishment of chairs of pedagogics in colleges and universities, believing that great benefits are likely to result,—first, in improved methods of instruction and discipline in higher education; secondly, in the more intelligent direction of common schools through the influence of professional men appointed on school committees; and thirdly, in a revision of the course of study that will make elementary and higher education two members correlated in one harmonious system.

Your committee see in this study of pedagogy in colleges and universities not only a resulting harmony between elementary and advanced education, but also the clearer definition of the province of the school as one province of education having a special purpose, coördinated with four other forms of education pertaining to; and peculiar to, the four great human institutions: the family, the social community, the state, the church. Without this clear definition of provinces there arises a constant tendency to make one form of education encroach on the province of another, or responsible for its results; and your committee are of the opinion that the study of education as a science and art in our universities will result in a careful consideration of the limits of the course of study and training in the school, and throw light on the educative character of the cardinal institutions of society here named, so as to discover what education, if any, belongs exclusively to any one of them, and cannot be undertaken by the school without wasting its forces in a vain attempt to perform functions that belong to other institutions; perhaps also relieving the school of the odium that attaches to it in some minds, because it does not remove the evils of society, and, besides this, destroying the empty conceit of school managers that the school is the only institution that educates.

Your committee regard these general studies in pedagogy as important to all the students of colleges and universities, inasmuch as American citizenship makes constant demands upon the individual for a knowledge of educational principles in his capacity of parent, or as voter, or public officer in the management of schools. All correct legislation in school matters and all correct administration of schools imply a correct knowledge of the proper scope of the labors of the school, as well as of the proper subordination of primary to advanced schools.

Your committee believe these considerations regarding the general bearing of education and its several instrumentalities to be a legitimate part of the higher education of all young men and young women in this Nation; and that some general instruction in this important matter should be given to all pupils, while more specific education in the practical methods of teaching should be furnished to all who propose to enter the profession of teaching.

Respectfully submitted: W. T. Harris,
E. C. Hewett,
Members of Committee present.

I append the communications received from the other members of my committee, partly confirming and partly supplementing its conclusions :

From Mrs. Grace Bibb-Sudborough, Professor of the Science and Art of Education in the State University of Missouri :

"I cannot attend the meeting at Saratoga. I indorse the Atlanta Report as submitted."

From E. C. Hewett, President of Normal University, of Normal, Illinois :

"I fully concur in all your report says; but I send herewith a paper presenting my views upon two or three additional points, which I ask you to incorporate, or to present as coming from me, as you choose.

1. Another argument for the study of pedagogy in our colleges and universities is this: As matters now are, it very frequently happens that men from the colleges without any professional study or training are placed as superintendents and principals to direct the teaching by young women and men who, in normal schools and elsewhere, have become well versed in a true pedagogy, at least in its more practical phases. Thus the master, although superior to his assistants in general knowledge and culture, is found to be decidedly inferior to them in technical and professional knowledge pertaining to the work in which they are engaged. Such an anomaly is the occasion of much harm and heart-burning, and it should be remedied.

2. The occupants of Chairs of Pedagogy in our higher institutions should do very much to formulate and promulgate the principles of a true science of education, in such a form as will be acceptable to all right thinkers on the subject, and in such a way as shall impress itself on the community in general. It is generally agreed by intelligent men that there is such a thing as a science of education; but exactly what it is, what are its principles, what their logical relation, what their proper form of statement, it is not easy to say. Here is work for the occupants of higher Chairs of Pedagogy.

3. It should not be understood that the teaching of pedagogy in our higher institutions is to supersede or interfere with the professional work now done in our normal and training-schools; it is, or ought to be, work in another branch of the subject; its field should be distinct, as its pupils will be. Its only proper effect in modification of what is now done should be that modification which always follows when lower levels are visited by pure streams of truth flowing down from higher."

From Hon. M. A. Newell, Superintendent of Public Instruction of the State of Maryland, and Principal of the State Normal School :

"I do not think I shall make any report on 'Chairs of Pedagogy.' Indeed, a careful reading of your report brings me much nearer to your views than I thought possible. But I will give the subject still more reflection, and if I reach any important conclusion different from yours, I will put it, and the reasons, on paper."

From Edward S. Joynes, Professor in the University of South Carolina :

"I concur fully in every principle and every point of your report,—so fully that I need add nothing in the same direction. My own experience,—having come to the work of teaching in early life without pedagogical training, and working my way to it slowly, through experiment, mistake, and self-correction, often with loss of time, temper, and opportunity,—has convinced me profoundly of the value of such preliminary training for all who would be teachers. You have heard me say, I think, that such training puts a young teacher into possession of those results of experience,—philosophy founded on experiment and on human nature,—which otherwise he must slowly attain, often at the cost of the best years of his life. But this point lies outside of the practical object of your report. With deference to it, without recurring to its general argument, I venture to add a practical suggestion:

Granting, as I do, all that the report claims, there yet remains the fact that but a few of our colleges or universities would now be able,—or if able, ready and willing,—to establish the special Chair of Pedagogics. They will not see their interest in it. I have tried the argument here and elsewhere, and have met the response,—short-sighted, indeed, but very plausible with such persons as usually constitute the governing boards,—that pedagogics is intended for only a limited professional class; *i. e.*, for teachers only, and so has no claim to be made part of general education. It will be a long time, I regret to assure you, before the great majority of trustees, and even of faculties, can be brought to see any deeper or any farther than this. Hence the question is, What is the best that can be done for the present, as preliminary to better things hereafter? and I have found for myself this answer:

Let us urge, wherever such chair cannot be fully established, that the subject at least be comprehended in some one of the existing chairs. The chair of Mental and Moral Philosophy exists in all colleges, and in most cases is filled by men of leading ability, who now have but little class-work to do, and this mainly in higher classes. Let us aim to make this, wherever possible, the chair of Mental and Moral Philosophy and Pedagogics, which, I take it, is really adding nothing new to the proper scope of the chair; for pedagogics is mental and moral philosophy,—the philosophy of man, applied in its highest sphere, that of education,—but this will make it the duty of that professor to give special attention and study to this subject,—to introduce a course of reading and lectures upon it; perhaps to call in the aid of experts, now and then, to give lectures to his classes on special topics.

Soon, then, I am sure, the importance and interest of the subject will be so felt by teacher and by students, that the faculty and trustees will have their attention aroused; a public demand will make itself felt for larger development of the subject; and thus I believe, in many cases, the professorship will come of itself in a short time, if only such beginning can be made."

I have quoted the words of Professor Joynes in order to present his view in the most direct and pointed manner possible. I indorse his plan heartily, and believe that it is the true practical way and manner to proceed to put in operation the new branch of study.

Wm. T. Harris,
Chairman of Committee.

THE HIGH SCHOOL:

ITS NECESSITY AND RIGHT TO EXIST AS A PART OF THE TRUE SYSTEM OF PUBLIC EDUCATION.

BY J. L. PICKARD, LL.D., PRESIDENT STATE UNIVERSITY, IOWA.

By public education is meant, education provided at public cost, and its system administered by public officials.

The system thus supported and administered is styled, almost universally, THE SYSTEM OF COMMON SCHOOLS. This system has become the subject of gradation, — its subdivisions varying in number and terminology in different sections of the United States, and sometimes in different parts of the same State; but a very generally accepted division is easily recognized in *Elementary Schools and High Schools*. The former have for their special province instruction in the rudiments of an education, and the latter enter upon a broader and higher field. Both are but parts of a symmetrical unity. All admit the right of the elementary part to public support. Some deny the right of the State to support at public cost the high-school part.

Taxation, say the opponents of higher education, can be resorted to only in the service of a public good. Then premising that only the simplest elementary education is a public good, the conclusion is easily reached that all taxation for high schools is in direct contravention of the Constitution, and cannot be for a moment maintained. Still further is the argument pressed that the few who alone can receive the benefit of the higher education should not be favored at the public expense. If the premises are correct, then is the reasoning sound. But are they correct? Who are better prepared to answer than the fathers of the Republic?

"A system of general education which shall reach every description of our citizens from the richest to the poorest; as it was with the *earliest*, so it shall be with the *latest*, of all the concerns in which I shall permit myself to take an interest."—JEFFERSON.

"If a nation expects to be ignorant and free in a state of civilization, it expects what never was and never will be. The functionaries of every government have propensities to command at will the liberty and property of their constituents. There is no safe depository for these but with the people themselves; nor can they be safe there without information."—JEFFERSON: *Letter to Colonel Yancey, Jan.* 1, 1816.

"The object is to bring into action that mass of talents which lies buried in poverty in every country for want of the means of development, and thus give activity to a mass of mind which, in proportion to our population, shall be the double or treble of what it is in most countries."—JEFFERSON: *Letter to Correa, Nov.* 25, 1817.

"Classical languages are a solid basis for most, and an ornament to all, the sciences."—JEFFERSON: *Notes on Virginia.*

"To read the Latin and Greek authors in their original is a sublime luxury; and I deem luxury in science to be at least as justifiable as in architecture, painting, gardening, or the other arts. I thank, on my knees, him who directed my early education for having put into my possession this rich source of delight, and I would not exchange it for anything which I could then have acquired and have not since acquired."—JEFFERSON: *Letter to Dr. Priestly, Jan.* 27, 1800.

"While you keep the great end of education in view; *i. e.*, to enable men and incline them to be more useful to mankind in general and to their own country in particular, and at the same time to render their own life more happy,—you cannot be in danger of taking wrong steps, while all of them tend to that end."—CADWALLADER COLDEN: *Letter to Franklin, Nov.*, 1749.

"And though the culture bestowed on the *many* should be successful only with the *few*, yet the influence of those few and the service in their power may be very great. Even a single woman that was wise, by her wisdom, saved the city."—FRANKLIN: *Letter to Samuel Johnson, Aug.* 23, 1750.

"In proportion as the structure of a government gives force to public opinion, it is essential that public opinion be enlightened. Promote, as an object of primary importance, institutions for the diffusion of knowledge."—WASHINGTON: *Farewell Address.*

The individual expressions thus far quoted are found to be types of the enlightened public sentiment of the earlier days of our history. We find in it the constitutions and laws framed and adopted by the most thoughtful men of the times.

The term "Common Schools" appears quite largely in all. We search Worcester and Webster in vain for a *limiting* definition. Nor does the Law Dictionary give us any light. Failing to find a definition in *words*, we must look to *practice*. But practice has materially changed during the past thirty years, hence we will confine ourselves to the earlier constitutions and laws, and to the practices under them.

The Constitution of Connecticut of 1818 names "Public or Common schools, and for the equal benefit of all the people of the State." The Legislature, acting under this Constitution, in 1841 gave to school districts the power "to establish and maintain common schools of *different grades.*"

The Constitution of Massachusetts reads thus: "It shall be the duty of legislatures to cherish the interests of literature, etc.,—especially the University at Cambridge, public schools, and grammar schools in the towns." The last provision continues in force an act of nearly two centuries earlier, by which the people were required to provide for higher education in proportion as their population increased, and we find distinct enunciation of the requirements in a statute of 1826. It required schools to be established wherever fifty families were found, in which should be taught all the lower English branches; for every five-hundred families a school should be opened for instruction in additional branches of history, bookkeeping, surveying, geometry, and algebra; and for every four thousand inhabitants in any one town a still higher grade should be established for instruction in Latin, Greek, history, rhetoric, and logic. The same statute provides that any town having less than five hundred families may provide for instruction in higher branches. The question of ability to meet the requisite taxation evidently lies at the bottom of the classification by numbers of inhabitants. New York made no specification as to branches to be taught, but in her common schools facilities were afforded for instruction in higher branches. It may be said that her schools were not entirely free, but this does not affect the question considered; viz., the signification of "*Common Schools.*"

The first Constitution of Ohio says: "The doors of the said schools (public schools), academies, and universities shall be open for the reception of scholars, students, and teachers of *every grade*, without any distinction or preference whatever." The statutes of 1837 contain the following provision: "Directors may determine the studies to be pursued in each school, so that reading, writing, and arithmetic shall be taught in the English language; *provided*, that nothing in this act shall be so construed as to prevent any other language in *addition* to the English from being taught in the common schools at the discretion of the directors. Incorporated towns, cities, and boroughs may establish schools of different grades."

Similar provisions are found in the statutes of nearly all the States, which, at the time considered, had school systems. They require uniformity, but it is a uniformity of *possibilities* rather than of *actualities.*

I think it will be clear that in the earlier legislation to which we are referred so constantly by the advocates of a *limited* common school, there will be found no warrant for confining the work of schools, supported by the people, to the simplest rudiments of an English education.

But perhaps legislators exceeded their authority. There is a tribunal established for the purpose of determining this question. Let us turn, then, to Supreme Court decisions in the continuation of this argument.

Very few decisions appear upon a full investigation of all the reports of the United States. These few are, without exception, directly or indirectly favorable to the higher education at public cost.

My first reference is to Tyng's Mass. Reports, Vol. 16, page 141: Commonwealth *vs.* Town of Dedham. The indictment found in the lower court recites:

"The jurors on their oath present that the town of Dedham, in the county of Norfolk, at said Dedham, on the 26th day of April, 1816, and from that time to the 26th day of April, 1817, did contain, and still doth contain, two hundred families and upward; and that said town of Dedham, at said town of Dedham, did during all the time from said 26th day of April, 1816, to said 26th day of April, 1817, neglect, and still does neglect, the procuring and supporting of a grammar school master, of good morals and well instructed in the Latin, Greek, and English languages, to instruct children and youth in such languages, which is in subversion of knowledge and in hindrance of that promotion of education which the principles of a free government require, and which the Constitution of the Commonwealth enjoins, and against the peace and dignity of said Commonwealth, and the forms of the statutes in such case made and provided."

The Supreme Court sustained the finding of the lower Court. The decision of the Supreme Court enunciates the principle that "every inhabitant had the right to participate in both descriptions of schools."

It will be observed that the indictment rests upon the town of Dedham in its corporate capacity. The town could not procure and support a grammar [high ?] schoolmaster except at public expense.

My second reference is to Metcalf's Reports, Mass., Vol. 10, page 508: J. N. Cushing *vs.* Newburyport,—suit brought to restrain the collection of a tax for support of a high school.

Illinois Reports, Vol. 79, page 567: Rulison vs. Post.

"In the agreed statement of facts, it appears to the Court that the schools established by the town of Newburyport, though extending to instruction in branches of knowledge beyond those required by the statutes, were yet *town schools*, within the proper meaning of that term, provided for the benefit of all the inhabitants; that the taxes levied for the support of them, in common with other town charges, were not illegal," etc. "As it cannot be presumed that they (the towns) have purposely acted in violation of the law, they must have acted on the assumption that, as the true construction of the statute, though they were bound to raise the sum for schools to the amount specified, they were not restrained from raising more."

"We are therefore clearly of opinion the General Assembly has invested school directors with the power to compel the teaching of other and higher branches than those enumerated to those willing to receive instruction therein, but have left it purely optional with parents and guardians whether the children under their charge shall study such branches.

The case cited arose from the attempt made by a teacher to compel the daughter of the plaintiff to study a branch (book-keeping) not named in the statute.

The most recent decision is that of the Supreme Court of Illinois (1880) in the case of Powell *et al. vs.* Board of Education of School

District No. 4; T. 7, N. R. 9 W., St. Clair Co., Illinois. The case rested upon the right to require the study of German in the public schools. The Court says:

30 *Mich., 8th of Post, page* 69: *Stuart vs. School Dist. No.* 1 *of Kalamazoo.*

"The mere fact that the German language is one of the branches taught does not change its character as an English school. An English school is one in which the medium of instruction is the English language. German is permitted, unless specially inhibited."

After reciting the facts pertaining to legislation down to 1850, the Court says:

"If these facts do not demonstrate clearly and conclusively a general State policy, beginning in 1817 and continuing until after the adoption of the present Constitution, in the direction of free schools, in which education, and, at their option, the elements of classical education migh be brought within the reach of all the children of the State, then, as it seems to us, othing can demonstrate it. . . . We content ourselves with this statement, that neither in our State policy, in our Constitution, nor in our laws, do we find the primary school districts restricted in the branches of knowledge which their officers may cause to be taught, or the grade of instruction that may be given, if their voters consent in regular form to bear the expense and raise the taxes for the purpose."

I have not been able to find any other decisions bearing upon this question. These cited fully sustain the right to include in courses of study for our common schools other and higher branches than those purely elementary. It may be noted that nowhere in the citations made, except the last, is the term "high school" used. It was so obviously a part of the common-school system as to need no special designation. The name came into use with the more modern gradation of schools, accompanying the division of labor in our industrial world. The principle had existed, and the work had been done under the name of *Common Schools,* before gradation was established. No new *thing* is introduced, but a new *name.* Change of name cannot certainly take away the *right to exist.* The right of that part of the system,—usually named High Schools,—to exist seems clear.

Turning to another point in the argument,—the relation of our common schools to our social and political systems,—I would introduce the words of an intelligent French observer, deputed by his government to inspect the schools of the United States. M. Buisson, in a report to the French Government detailing the results of his careful study of the common schools of the United States, thus speaks of the high school:

"In other countries it is to be feared that the children of different classes of society, although they may be brought together for a time in the public school, will very soon be found separated as widely as are their families in the social scale. In America everything is done to retard and to reduce the degree of that separation, by carrying as far and as high as possible that common instruction which effaces all distinction between the rich and the poor. Thus do the two degrees of the public school render the State diverse but equally important service. The one gives to it an entire population knowing how to read and write; the other draws from this mass a select few whom it endows with an intellectual capital sufficient to pay a hundred times its cost. How is this selection made? By favor of public liberality, which is a burden to none, thousands of children, — the best, the most gifted, the most highly educated, the best fitted for labor, the best prepared for the battle of life both by the examples of their parents and by their own struggles, — come out of the mass of the poor, perhaps indigent, population where, otherwise, they would remain undistinguished, and year by year infuse new life into the middle classes. If it be true that the prosperity of a republic is in direct ratio to the renewal of these middle classes, to the abundance and facility of their indefinite recruiting, then the high school of the United States, whatever it may cost, is the best investment which can be made of national capital."

This intelligent presentation is certainly free from all bias. Upon the benefit to the State from the elevation of the middle classes, from the possibilities opened to the poor, from the removal of all caste distinctions, from the feeling of independence which accompanies the gift in the mind of the recipient, from the claim for service which the State thus insures, rests a strong argument in favor of the high school.

The principle that obtains in all physical science, that the strength of any structure is only equal to that of its weakest part, will not be found inapplicable to political organizations. The weakness of our Republic will be found in the want of intelligence in the citizens. The high school properly conducted is a source of strength, and on this account has a right to exist. Every child in the lower schools feels the influence of the higher, and in striving after that which may be only a possibility to him, he enlarges and strengthens, his actual attainments. For its indirect influence it has a right to exist. The right to existence does not imply the right to complete absorption of public interest, nor to undue prominence in public regard. It is but a part of a system neither more nor less valuable than any other part, higher in position only, as the branches are above the roots of the tree, dependent upo nnourishment drawn from the soil, and depended upon for nourishment drawn from the atmosphere.

THE HIGH SCHOOL: ITS RELATION TO THE LOWER GRADES OF PUBLIC SCHOOLS.

BY JOHN HANCOCK, PH.D., DAYTON, OHIO.

No school-system can effectually meet the object of its creation which does not embrace in its constitution provisions for carrying the education of youth beyond the common branches. With one hand the high school beckons the pupils of the elementary schools to come upward to its more elevated outlook, and with the other it points its own students to the still higher outlook of the college. Lacking the high school, the pupil of the lower schools would lose a chief incentive to exertion. Build in front of him at the very start of his career an impenetrable wall, barring all future progress, and the motive to activity is gone. His life at once begins to shape itself to lower aims, and he grows content to be a small creature. On the other hand, with a good high school to crown the public-school system, there is provided for every child, even the youngest, a potent and ever-acting incentive to push forward. Each promotion in grade comes to be regarded as but another step in the upward march to the high school. Of course the larger number of pupils fall out by the way, but most will have climbed higher, and have done their work better, from having had their eyes fixed on this goal. The atmosphere of a generous equality comes to pervade the community, and the poorest and most neglected child is led to feel that there is something in the world for him to do which shall be well worth the doing.

The course of study, too, for the lower schools is certain to feel the influence of the high school. This course is too often afflicted with a fearful leanness,—built on the principle that the three R's and but little of them, are sufficient to meet all the educational needs of common people. In forming a curriculum for the lower schools, the liberal spirit begotten of the high school is sure to furnish here and there a new element,—a germ of growth which shall develop with the advancing civilization and culture of the community,—nay, rather shall be the chief cause of this advance in civilization and culture. In other words, the course of study for the elementary schools, instead of being a meager, dead stalk, becomes a living growth, full of sap and vigor.

But perhaps the influence of the high school upon the lower schools is exerted most powerfully in providing for them a class of teachers of a higher grade of qualifications than it was possible to secure under the former order of things. No argument is needed to show the utter vanity of all schemes of public education which at the same time fail to place a competent teacher in every school. The high school cannot give us professionally-trained teachers,—the supplementary work of the normal school is required for that,—but it does give us teachers whose views have been broadened and love of knowledge deepened by some taste of a liberal culture. Nor is this taste so slight as some might be inclined to think; for it should be remembered that the high school of to-day, as constituted in most of our large towns and cities, gives a better education in the sum-total, than did the average New England college fifty years ago.

And this higher education of teachers as a class renders possible the successful introduction into the lower schools,—especially into the primary departments,—of those improved methods of instruction which have lifted teaching from something less than an empiric art to the level of a science, and are doing more than any other agency to make knowledge loved by the whole people. Without the character-training and resources which come to our teachers from a high-school education, these methods would prove an utter failure, or degenerate into a mechanism more lifeless than the worst mechanism of the dreadful past; for it may be stated as an educational axiom, that intelligent methods can be applied by intelligent teachers only. Machine methods are necessary wherever machine-teachers are found.

THE RELATION OF THE HIGH SCHOOL TO BUSINESS-LIFE: WITH THE TRUE COURSE OF STUDIES.

BY WILLIAM A. MOWRY, PH.D., PROVIDENCE, R. I.

It will be necessary at the outset to define Education. The term may be used in two significations: first, in referring to the act or process; and secondly, in referring to the result of this process. Its particular use in this paper is with the first meaning. Education is the process of developing and training the powers and capacities of human beings. Education should achieve these results: "to lead men to know, to do, and to become." "The first step in human development is the acquiring of knowledge." The second is "the discipline, culture, and training of the several faculties." Again, "the *kind* of power a man shall wield is even more important than the degree." It is clearly evident that education goes beyond the mere acquisition of knowledge. To learn to read, write, and cypher, to demonstrate propositions in geometry, to solve problems in algebra, or to acquire a knowledge of the laws and principles of physics or chemistry, does not constitute the whole process of education. Neither does education consist in learning a trade, by which the daily bread is to be earned. But education means, according to Webster, "the leading out and training the mental powers;" "the informing and enlightening the understanding;" "the forming and regulating the principles and character;" "the preparing and fitting for any calling or business, or for activity and usefulness in life." "Education is properly to draw forth, and implies not so much the communication of knowledge as the discipline of the intellect, the establishment of the principles, and the regulation of the heart."

These distinctions, in the nature and scope of education, are essential to a correct apprehension of the relations of the high school to business-life, and aid us materially in determining the true course of studies. To educate the human race is, then, to develop humanity: to cause the physical, mental, and moral powers of man to grow, to deepen, to broaden, and to strengthen; *and*, also, it is to bring all these increased powers and capacities within the complete control of the man, to give him a broader scope, a higher reach, a stronger grasp. It therefore follows that the schools should not teach trades; but that they may teach the principles which underlie all trades, especially the cultivation of the mind through the hand and the eye; not teach to peg or sew a shoe, thereby to earn a livelihood; but the power of the shoemaker shall be so increased by education as to make him a better shoemaker. The schools should not teach directly how to perform the various duties of a farmer; but the man being a farmer, education should enable him to know what to raise on this or that soil,—to produce better wheat, more of it, and at less cost; in short, to carry the business of farming to a higher grade and to do more business, do it better, and do it cheaper by having been educated in the schools. Above all, being a *man*, to be a wiser, a more useful, a more successful, and a *better* man,—less like a demon, less like a brute; more like an angel, more like God.

It is clear to all business-men that a larger intelligence, a sharper intellect, a better cultivated mind are necessary to transact any kind of business successfully, to-day,—to meet the intense competition, and to succeed in any calling in life,—than were required one, two, or three generations ago. It is also apparent that a still larger intelligence, a sharper intellect, a better cultivated mind will be necessary to attain equal success a generation hence than are found requisite to-day.

If the foregoing propositions are admitted, it will appear that the principal aim of education is to discipline the mind and increase its powers, not merely as an instrument for an immediate *end*, but especially as a means for more distant and perhaps indirect, results to follow; in short, that greater ability and consequently greater success and usefulness may be attained in life.

Two things, then, would follow of necessity: 1. That the business interests of the country require a large advance in the quality and completeness of schoolwork over the past. 2. That to attain this result we must improve the generally-accepted curriculum of school studies. From the first of these we infer that the high school is necessary for the successful carrying out of the business projects of the country; and from the second, that careful attention should be given to arranging the most philosophic, the wisest, and the best course of studies for a high school, whose chief function is to prepare young men for a business-life.

That is the true order of studies which best develops the various powers of the mind and places them under one's most complete control. It is frequently observed that a teacher who is an expert in one branch of study, magnifies that department to the exclusion or neglect of other studies of equal or greater importance. For example: it is often assumed, either consciously or unconsciously, that mathematical study does more than most other departments of school-work toward disciplining and increasing the reasoning faculty and its cognate mental powers, and thereby produces a greater and more rapid growth of mind. But it is confidently believed that this is not true. We believe that the schools should not be based upon mathematics, or upon any other one direction of study. In the high school the pupils are supposed to have reached that age when disciplinary studies, especially those calculated to improve the reasoning powers, may be pursued to advantage. The powers of the mind are not simple, single, and isolated, but multiform, compound, and complex,—interdependent upon each other for the best performing of their work. These powers should be developed harmoniously, uniformly, and consecutively.

Avoiding hobbies, such an arrangement of studies should be made as shall accomplish two things: viz., (1) the pursuit of the several branches taken, in their natural and logical order, and hence (1) the harmonious development of the several sides of the mental organism. Assuming a four years' course of study, for pupils averaging at the beginning of the course fourteen years of age, the studies to be taken will group themselves under several heads; and we will first consider three divisions; viz., 1. *Language Studies;* 2. *Natural Sciences;* 3. *Mathematics.* These three directions of study are placed in the order of their prominence, and should be pursued simultaneously.

Here it will be necessary to consider particularly the question of the study of the Latin and Greek languages. From the technological schools of Germany, the schools of science in America, and from many of the best minds in England and this country, the testimony is strong in favor of the study of these ancient languages for their influence in disciplining and developing the mental powers.

Says Prof. C. O. Thompson, in his paper which forms a part of this report: "In a body of students pursuing technical studies it is easy to detect the advantage those have who were 'fitted for college,' as shown in power of concentrated attention, quickness and accuracy of apprehension, dexterity in speech, and general command of themselves."

We believe that the study of these languages is of great importance, for the purposes of development and training mentioned above, and that our experience sustains us in the belief that no sufficient substitute has yet been found to take their place. Yet the element of time comes in, and the opinions of the community are such that in many places we shall find it desirable to divide the curriculum for the high school studies, so that while those who "fit for college" pursue the ancient languages, others who wish to make the most direct preparation for business may leave these classical studies and confine themselves to what is often called *An English High School Course.* Yet even for such pupils, it is strongly recommended that where it can be done they pursue the Latin language in their earlier years,—say from ten to fourteen,—in place of a more exclusive attention to English Grammar.

With this explanation and statement of the value of classical study, we hope to be not misunderstood or misinterpreted, in now speaking of the most desirable and the most philosophical course of studies for an *English high school*, or an *English department* of the high school, whenever such exist and are thought desirable as a course of study in preparation for business-life. We would recommend, therefore,—

First: Language, or literary studies. These should include, during three years, Rhetoric, English composition, analysis of language, a careful and critical study of the choice thoughts of our best English authors, both as to matter and style; the general study of English Literature, and, as opportunities offer, one or two modern languages, pursued both as an end and as a means; that is, French, for example, may be studied from its grammar and philosophical side, so as to give the pupil something of the same kind of mental gymnastics and drill which come from the study of Latin; or by the oral method of familiarizing one's self with a certain vocabulary of words fixed in the mind especially for their immediate use in speaking that language.

Second: The Natural Sciences. These should be studied in their natural order, giving due prominence to the more practical branches, Chemistry, Physics, and Mechanics, and the study of Astronomy, so well calculated to broaden and ennoble the mind and to develop the powers of reflection.

Third: The Mathematics, pursued in their logical order. Assuming that some elementary principles of Geometry have been learned at a previous period, we should pursue (*a*) Elementary Algebra, (*b*) Elementary Geometry, (*c*) Advanced Geometry, (*d*) Advanced Algebra. (*e*) Trigonometry and Surveying, and then (*f*) Advanced Arithmetic, with the applications of Algebra and Geometry to Arithmetic.

Having thus developed and disciplined the mind by these studies for three years in these three general directions; viz.,—1. Language and literary studies; 2. The Natural Sciences; 3. The Mathematics; pursued consecutively and conjointly, we are now prepared to proceed to a new line of study, to occupy the fourth year of our course.

(1) Language gives place to History, which should be pursued not merely as an act of the memory in fixing in the mind a series of facts, arranged in chronological order, but the study should be pursued in

a philosophical way, having regard to the causes of important events and looking for the results of prominent and marked occurrences. Properly pursued, this study will develop the reasoning faculties and enable us, in tracing the progress of civilization, to observe such relations of cause and effect as will aid materially in fixing in the mind those strong principles of action which underlie all material prosperity, whether individual or national,—such as industry, bravery, generosity, probity, and, in general, moral rectitude.

(2) The Natural Sciences or Physics gives place to Metaphysics, and, we pursue, in a practical way the study of logic and mental philosophy. The importance of this line of study at this particular point of mental development can scarcely be overestimated. A careful study of the perceptive powers; of consciousness; of attention; of abstraction, especially including analysis, combination, and generalization; of the memory, of reason, and under this head the general principles of logic; of imagination and taste; cannot fail to develop those powers which will make a stronger, more progressive and yet conservative, broader, more useful and more successful business-man.

(3) The Mathematics must now give place to the practical and applied studies of Political Economy; the Constitution and government of the United States, and one's own State; and a general view of our governmental and constitutional history.

We have thus outlined for this final year of our high-school course three directions of study; viz.,—1. *History;* 2. *Metaphysics;* 3. *Political Economy*, etc. In this way, with this consecutive and coördinated system of correlative studies, it is believed our English high-school education will produce not erratic geniuses, fitted for nothing but failures, but men, with well-balanced minds, prepared to win success and achieve usefulness in the sharp contests of business-life.

NOTE.—In this course only the principal outlines of study have been indicated. It is taken for granted that particular attention is paid throughout the course,—as the circumstances shall warrant and make necessary,—to writing, spelling, vocal culture; to drawing and other methods of cultivating the mind through the hand and the eye; to gymnastic exercises and physical development in general; to the inculcation of proper moral lessons and whatever else should find its way into the best schools of the grade here indicated. By the foregoing plan of study it is merely intended to indicate the several general and coördinate lines of mental development.

THE HIGH SCHOOL: ITS RELATION TO SCHOOLS OF TECHNOLOGY.

BY PROF. C. O. THOMPSON, TERRE HAUTE, IND.

Two sorts of institutions are designated by the term Schools of Technology,—Schools of Engineering, and Industrial Schools. The latter are somewhat in danger of being confounded with reformatory establishments, and are seeking a distinctive name,—so far without success. If a definition of technology could be accepted, as it certainly will be in time, which would confine it to engineering, then the term Technical School might be applied to those institutions whose object is to stimulate a taste for manual labor in workshops and to prepare boys for workshop life; but, at present, the term Technology is applied to all forms of special training which tend to fit men for any kind of service in the productive or constructive arts.

By a distinctly recognized process of segmentations, the schools of technology are making a real and organic division of labor which is already in advance of set terms, and which must be recognized in any such discussion as is undertaken in this report. The Worcester Free Institute, The Massachusetts Institute of Technology, The Sheffield Scientific School, The Stevens Institute of Technology, and some others, are schools of engineering, in each of which the same end is sought by different methods. It is of first importance to understand the relation of the high school to these schools of engineering. Nothing can be plainer than that any institution whose object is special, *i. e.*, any professional school, must demand of candidates for admission ample, general preparation, in order to do its work to the best advantage, and to escape the perils which constantly beset it. The ideal preparation for an engineering course is "to fit for college." It is perhaps an open question whether such knowledge of Greek as boys now get in fitting-schools is indispensable to success in engineering; but few professors of experience will hesitate to admit that a thorough training in Latin, history, English grammar, at least one natural history science, and the elementary mathematics, is the soundest foundation on which an engineering course can rest. In a body of students pursuing technological studies, it is easy to detect the advantage those have who were "fitted for college," as shown in power of concentrated attention, quickness and accuracy of apprehension, dexterity in speech, and general command of themselves.

Now, as the high school is specially the boon of the great producing and manufacturing class, and as technology draws its main support from the same class, it is reasonable that such a relation should exist between the two as should enable all boys to obtain the greatest possible advantage from both. The high school ought to fit boys for the school of engineering.

It may be best to concede something in the matter of time to the exigencies of the situation of the average boy who will not go to college, but will go to an institute of technology; but the *boy* must remember that the institute fits him for immediate entrance upon the active duties of his profession, while the college drops him three years short of that point. If, then, he will not go to college, he can at least afford to spend as much time in fitting for engineering as his neighbor who will go to college, for he will find his account in laying the broadest possible foundation before he begins to rear his superstructure. More and better *foundation work* is the demand of technology upon the high school. This proposition does not need any argument. The practical question is, What shall the high school do?

It is not practicable now to insist upon the ideal preparation in all cases, but every boy who aims at being an engineer ought to find in a high school such a course as this, extending, at least, over three years: In mathematics—Algebra, geometry, and trigonometry, *followed by a review of arithmetic.* In language—Latin, two years; *French, one year; English, three years. In history—general history. In natural-history science,—elementary botany, zoölogy, and mineralogy. The physical sciences can be studied to vastly better advantage in the Institute of Technology, and *after* a good preparatory training in the high school. But, when all the engineers are provided for, there remains a graver problem. Engineers are to design, direct, construct. They are to apply the canons of science to the industrial arts. Particularly are they to meet the new demand for machinery, by improving the old and producing the new. Every year puts some form of handicraft upon the retired list, and so increases the demand for engineering skill in the mechanic arts. Every new machine also increases the number of men who cease to be artisans in the old sense, and are occupied in building machines, in tending machines, or in finishing by simple hand-labor the products of machines. How shall the high school prepare boys for this new workshop-life? is a second question of greater importance than the first.

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* It is desirable that beginners in an engineering course should be able to read easy French, so that they can devote their time to German and English.

It is assumed to be the function of the high school to do this. If any one doubts it, and would have distinct manual training enter into school-life at an earlier period, he may consult the objections to such a plan recited in the Forty-third Annual Report of the Massachusetts Board of Education, which seem to me unanswerable. The average pupil of our modern public schools receives, below the high school, 166 weeks of instruction of 30 hours each. This is not too much for the legitimate work of the lower schools; and it cannot be shown that any form of manual training introduced below the high school would tend to increase the time of school-life. All the facts and analogies of boy-life are against such an expectation. If, however, a definite provision is made for technical training, with a definite aim and a promise of occupation for the graduates, at a point just beyond the lower grades, it is very likely to increase the attendance in those grades. The plan now submitted seems to me reasonable and practicable:—

Provide a course of two years, of forty-two weeks each, using ten hours a day for five days a week. Take boys from the grammar school, who prove the propriety of giving them a trial by seeking admission, from twelve to fourteen years of age. Divide each class into two equal sections. Provide a workshop of sufficient capacity for one-half of these boys, *i. e.*, one section of each class at a time, and let the sections of each class alternate by half-days in using the shop. Provide a school-room in which precisely the same arrangement is made for instruction, except that attendance shall be required for three terms,—two hours being spent in study at home or in drawing. The result will be that each boy will receive 2,100 hours of shop-drill, and will spend 2,100 hours in school in the two years; the superintendent of the shop will be on duty ten hours a day, and the teachers in the school six hours a day. The workshop must be equipped with tools and machinery, and the boys taught construction in wood and iron, with as great variety and definiteness as possible. In the school-room they may study algebra, geometry, trigonometry, and arithmetic, in order,—twelve hours a week; drawing, six hours; science, six hours; English, one hour,—in all, twenty-five hours a week. At the end of this time, the experience of thirteen years in the Worcester School warrants me in saying that these boys will have no trouble in finding situations in workshops; or, if they find it possible and desirable, they can enter a school of technology and become engineers.

The cost of such a school will depend on the size of it. Buildings, engine, and boilers being given, I find that an expense of

$10,000 a year for five years will provide tools and pay for instruction for eighty boys, leaving the equipment good at the end of that time, to go on for an indefinite period at a much reduced annual expenditure. The plan adopted in the State of New Jersey seems to me the true one. The State promises $5,000 a year for five years to any town that will raise an equal amount for an experimental technical school. This plan gives the aid of the State through a special grant, and throws the responsibility of successful management upon those who are interested in the scheme in any given locality. If the experiment succeeds, there will be no lack of support from the classes directly interested in its results; and it is clear that the form of practice can be determined by the prevailing industries in any town.

A single fact shows the importance of giving immediate attention to this matter of the training of boys for technical pursuits: the dispersion of the manual trades has killed the apprentice system, and no manufacturer who is competent to train boys can afford to do it. What the master-mechanic has abandoned, the school must do; for whatever a boy can learn by direct inculcation, the school ought to teach him.

EDUCATIONAL UNITY.

THE HARMONIZING OF ELEMENTARY, SECONDARY, AND COLLEGIATE SYSTEMS OF EDUCATION.

The Committee to whom was referred the Harmonizing of Primary (or Elementary), Secondary, and Collegiate Systems of Education, present the following report:

The three systems here mentioned embrace the entire course of general education. They cover the whole of the school period, and they include all classes of institutions in which the educational work is carried forward. Those here called primary, or elementary, may be public or private, may be supported by taxation and directly controlled by public authority, or may charge tuition fees and be independent of the State. So the secondary schools may be public high schools; academies,—endowed, or the property of private persons,—or preparatory departments of colleges. And the collegiate system includes all institutions giving a liberal education, whether called colleges or universities, whether endowed by private munificence or supported by public funds. This system is not understood to include professional schools, or post-graduate courses.

These three systems are not parallel, but successive. They are not alternative or competitive. They are strictly parts of one continuous system; three stages of the educational process, succeeding each other in the order named. The education of the pupil is supposed to begin in the elementary, through which he passes into the secondary, and thence into the collegiate, where the work under teachers is completed. The time usually spent in the elementary department is six or eight years; in the secondary, three or four; and in the college, four.

These are the existing systems of general education. They are not now to be created, to be called into being; they already exist, and are doing, and have been for many years doing, their work. The youth who is so fortunate as to enjoy the best educational advantages begins with the elementary school and ends with the college. If here and there one receives private instruction for parts of the course, whether in its earlier or later stages, the case is exceptional. The vast majority who are educated are educated in these three systems of schools. Everywhere in the civilized world this general process is substantially the same. It is the course through which the intelligent parent, in the old world or the new, who wishes to secure for his child the best results of general educational training, will desire that child to pass. The three stages may not cover the same periods in different countries, and they may be known by different names; but in general the time from the age, say, of six to twenty or twenty-one, is devoted to the educational work.

The general object aimed at in all these three systems is the same. They have in view exactly the same end; they all tend toward the same goal. The very reason of their being is to transform the child into the cultivated man or woman. The educational course is virtually one. Its essential law is unity. Each system, each school, each teacher, has a particular work to perform for securing the grand result. Without harmony in the working of the several parts, there will necessarily be disarrangement, confusion, loss. In a manufacturing establishment every man's labor, whether of head or hand, looks to a given product. No man, from the superintendent to the lowest workman, works at random, or independent of the rest. In the building of the locomotive every screw, every rod, every plate is made to fit the place for which it is destined. This is essential to securing the final result, the completed machine. In the cotton-mill the size of the thread is determined, not by the preference of the individual spinner, but by the fineness of the cloth into which that thread is to be woven. So is it in the educational process. Every part of the work is a work of coöperation. No one man takes the boy or girl through all the stages. Each teacher in each system has a part assigned to him. He is to take the pupil over a portion of the course; to advance him from one given point to another. His work is well done when the pupil passes from him thoroughly prepared for the subsequent stage. The best education is secured when the work of one system or stage thus fits into the work of that which follows it.

Your Committee believe that this essential unity of the educational process will not be controverted. It is independent of the particular character of schools, as public or private. All the schools of all the systems may be supported and controlled by public authority, or that authority may reach a part of them, or all may be outside of it. Whatever may be true in this respect, the educational process must have a beginning and an end. In each case the pupil must pass through the successive stages. Nor is this unity affected by any imperfection of any of the systems as now existing. If the secondary system be imperfect, it is still the second in order, and the pupils from the elementary schools must pass into it. So, if a liberal education is to be secured, the work must be done by the colleges, because they constitute the third system, and the only one to complete the course. These three systems may all be made better from time to time, and should be; but they are the existing systems, and constitute the one great course of general education.

The language of the subject assigned to your committee implies a lack of harmony. They were directed to consider the *harmonizing* of the three systems. The primary, or elementary, and the secondary are believed to be in substantial harmony. So a considerable portion of the secondary are in harmony with the collegiate. The exception is in the case of some of the public high schools. In some States most of these schools give instruction adapted to the work that is to follow, and in all the States the best schools do this. They prepare their pupils for the colleges. In others, however, the pupil finds when he has finished the high-school course that he must spend one or more years of special study before he can enter the college. Here is a chasm between the second and third of the stages of the great educational course. The harmony is broken. It is as if, in a long journey, we come to the terminus of one railway and find a space of twenty, fifty, or a hundred miles before the other begins; and we must give up the rest of our journey, or get over this intervening distance as best we can. This would be abnormal in railway traveling, especially on a great through *route*, between two very important points. The break between the high school and the college is quite as abnormal in education. The high school is sometimes, perhaps often, conducted as if it were the last stage of the educational process. From the course of study, from the general animus of the school, and perhaps from the direct influence of the teacher, the pupil receives the impression that there is nothing more to be learned. Thus his desire to secure a complete general education is checked or extinguished. The third of the three systems, the last stage of the process, is virtually ignored. The high school is made the terminus.

It is true that many pupils do not go beyond the high school. It is quite as true that a still larger number do not go beyond the elementary schools. But the elementary do not, on this account, ignore the high schools. On the contrary, every teacher desires that the largest number possible should pass up from the lower schools into the higher. Your Committee cannot see why the high school should not recognize the college in the same way, and give instruction with reference to it, to those pupils who wish to pursue their studies beyond the high school course. The unity of the educational process certainly requires this. It requires also that those who expect to take a collegiate course should not be required in the high school to do that work which must be done over again in the college. The chasm now existing in so many cases between the high school and the college may thus be easily bridged; and valuable time be saved by omitting matter which will be better attended to at a later period.

Many colleges have provided a course of study in which the modern languages and other branches are substituted for the Greek of the classical course, the two courses being in other respects identical. For this course the degree of Bachelor of Philosophy is given, as that of Bachelor of Arts is for that known as the classical course. These and other modifications clearly indicate a willingness on the part of the colleges to do all in their power to secure harmony between the collegiate and secondary systems.

Your Committee have not attempted to mark out with exactness the different functions of the three systems whose harmony they were asked to consider. They have simply taken them as the first, second, and third of the three great stages of the educational process. Being successive stages in that one process. their successful working imperatively requires harmony. It is, then, manifestly the duty of all on whom is devolved the responsibility of marking out the courses of study for these three stages to keep this harmony constantly in view. While the function of the colleges, as the final stage of the educational course, should be never lost sight of, the work they require should, as far as possible, be so arranged that the secondary or high schools can adapt themselves to it. And, on the other hand, the work of the secondary should be so arranged as to facilitate in all practicable ways the passage of the pupils from them to the colleges. It should be noted that those States, whose educational status is regarded as the highest, furnish the largest proportion of high schools that give preparation for college. And in all the States it is the best high schools, whether in large towns or small, that do this college preparatory work.[1]

Your Committee have not deemed it necessary to go into any detailed arguments for classical instruction in the high schools. They have thought it sufficient to present as clearly as they could the single idea of *the unity of the educational process;* believing that if this be conscientiously acted upon by the Boards of Control and Instruction in our schools and colleges any want of harmony would soon disappear. The question is not one of individual preference or prejudice as to the utility of certain studies, but whether the young men and women of the land shall be helped or hindered in their efforts to obtain a liberal education.

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[1] In some of the high schools in Michigan a fee is charged for instruction in Greek.

COURSES OF STUDY FOR COUNTRY SCHOOLS.

REPORT OF COMMITTEE ON A COURSE OF STUDIES FOR COUNTRY SCHOOLS; J. W. DICKINSON, *Chairman.*

The topic assigned to the Committee on Elementary Education is, "A Course of Studies for the Country Schools." To construct a satisfactory course of elementary studies it will be necessary to ascertain,—

I. The ends to be secured by a course of studies.

II. The principles to guide in the gradation of the studies of pupils according to the different stages of their development.

III. To make such an application of the principles as to meet the varied wants of pupils belonging to city schools, to schools in the large towns, and to the schools in the rural sections of the country. Pursuing this plan, the committee have unanimously adopted the following

REPORT.

The report will appear at first to recommend a course of studies suitable only for the graded schools of the larger towns; but as our schools are all graded, even though the different grades are taught, it may be, by one and the same teacher, the course is designed for the schools of the small towns also. At least, the course proposed may be considered an ideal course which will guide to a practical course for the schools of any community.

I. *Ends to be secured.*

There is one ultimate end to be secured by all school exercises: the harmonious development of the faculties of the human mind. To attain this end, several subordinate ends must be sought.

1. The child must be subjected to such modes of life as will give him a sound body.

2. He must acquire a sufficient amount of useful knowledge.

3. He must become master of good methods of thinking and acting.

A sound body will furnish the mind with a good instrument to use.

Useful knowledge is both the result and the occasion of that activity of the mind which produces the best development of the powers.

A good method of work will determine the amount and character of both the knowledge and development acquired.

II. *Principles to be observed.*

In providing for the complete development of the child, the educator must keep his attention steadily fixed on the nature of the child's mind. A course of studies adapted to the different stages of development of which every mind is the subject, will furnish an orderly arrangement of topics that will occasion the right exercise of the observing powers,—the powers excited to activity by the presence of external objects; the exercise of the representative powers, memory and imagination; and the exercise of the elaborative powers, generalization and reasoning. While it is true that the mind is a unit, and so is not divisible into distinct powers, still as it acts in different modes, it is usual to assign to it different powers as its different modes of acting are considered. The different powers are simply functions of a single agent; yet they are distinct from one another, both in their mode of acting and in the objects of their activity. To form an idea of a present object is a distinct act from that of reproducing a similar idea of the object when it is absent; so we say the mind has both a presentative and representative power. For a similar reason we say the mind has an elaborative power, by whose activity it performs all those operations involved in classification and reasoning.

While it is true, also, that no definite period of time can be appointed for the exclusive training of the mind in any of its modes of activity, still both consciousness and observation prove that there is a stage of development in the history of every child when the more especial work of its intellect is to observe external things as they are presented to the senses; that at a later stage it has added to its power of observing an increased facility in reproducing the real by memory, and the power of creating the ideal by imagination, making use of language instead of things as the occasions of activity; that, finally, there is a third stage in which the intellect has, in active and easy exercise, in addition to the acquisitive and conservative powers, the power of generalizing particular truths, of forming classes, and of arriving at a knowledge of general principles.

On account of the existence of these stages of development of the mind, and on account of the relations which the different kinds of knowledge hold to one another, educators are accustomed to grade the schools and to establish an order of studies, in which due attention is given to the activity of the mind and the kind of knowledge which characterizes each stage of mental development.

III. *Application of principles.*

The topics of study and practice adapted to the first stage of development mentioned, are reading, spelling, elementary composition, numbers, linear drawing, singing, and gymnastic exercises.

Reading should be taught as a means of acquiring knowledge, of reproducing it, and of expressing it to others.

Spelling should be taken up, as necessary to the construction of words in written composition, but not as immediately connected with reading.

Exercises in numbers in the lower elementary schools should be confined to the application of the four fundamental rules to integral units. The pupils may be taught to construct as well as to solve their own problems.

Elementary composition may be introduced into the primary schools from the first. Oral and written composition, with reading, may be classed under the topic Language Lessons. The pupil is to be prepared for exercises in constructing compositions by objective teaching, that has for its object a real knowledge of what is to be described. Careful and persistent instruction should be given in the selection of words and construction of sentences. A few marks of punctuation may be introduced. Pupils in elementary composition should be taught to use figurative language, and that use of language which constitutes a good style, all to be taught as facts without referring to principles.

Linear drawing should be introduced for the training it gives to the hand and eye, and the effect it produces on the habits of observation. Drawing may be made also a means of cultivating the taste, by leading the pupil to turn his attention to the beauties of nature and of art.

Gymnastic exercises have for their object the health and grace of the body. They should therefore be planned and conducted by those who have a knowledge of the physical constitution of the children, and the conditions necessary to its proper development. All that which is presented to primary pupils must be taught objectively.

In addition to the topics peculiar to primary work, a series of lessons should be given on the properties of things. These are to prepare the pupil to take up the work done in the grade of schools above his own, where the pupils are put to comparing things with one another for those marks in them by which they are known to be either alike or unlike.

The second grade of development will require the following course of studies: Reading, Spelling, Composition, Numbers, Singing, and Drawing, which studies are a continuation of the primary course, but more advanced; also facts of History, elements of Geography, elementary lessons on plants, animals, and minerals, and elementary lessons in Chemistry and Physics.

Reading is to be conducted after the same general manner as in the primary course, except there may be more practice in silent reading, Selections from both prose and poetry may be read. The attention of the pupil should be called to the figurative language to be read, and to some of the properties of style.

Let the spelling exercises be conducted in the written form. The words spelled may be taken from the reading-lessons, or from any lessons given in the course. The pupil will have a large amount of spelling in connection with his written composition.

Written compositions are now to be constructed in accordance with a plan which is to be illustrated by the teacher. The subjects of the compositions may be natural objects or historical events, or the creations of the imagination. The teacher should correct the spelling, the grammatical and rhetorical structure of the compositions, and to a slight degree their punctuation.

The fundamental operations in arithmetic may be applied to both integral and fractional units, and to compound or denominate numbers. The metric system of weights and measures may be introduced, and all the arithmetical knowledge gained may be applied to the simple forms of business-life.

Some of the events of history may be taught to pupils in their second grade of development. Let these events, for the most part, relate to the United States, or to the State in which the pupil lives. They are the facts of the discoveries, explorations, and settlements made; of the revolutionary and constitutional periods of our history, and facts pertaining to our Civil War. The same topics that will apply to the whole country will apply equally well to each one of the States.

The elements of geography which it is proper to introduce into this grade of instruction include object-lessons that have for their end a training of the pupil to learn from illustrations. They include, also, a knowledge of that which is expressed by geographical terms, and a knowledge of those geographical objects with which it is desirable the pupil should become acquainted.

Elementary lessons on plants, animals, and minerals should direct the attention of the pupil to the parts and qualities of these things, a knowledge of which will enable the learner to compare the different kinds of natural objects for their resemblances and differences, and prepare him for a future classification.

By experiments, made with proper apparatus, those changes in bodies which do not affect their identity, may be presented for an observation of facts in physics, and those changes in bodies that do affect identity, for facts in chemistry. The facts taught through a reproduction of phenomena by experiments should be such as will be useful for the pupil to know, and such as will be used in scientific study, if the pupil should desire to pursue his work beyond that taken up in the elementary schools.

The third grade of development, that which relates to the special cultivation of the reflective powers, will require the teacher to present the subjects of study already mentioned in their more advanced forms, and finally as sciences. Reading should be taught as a means of gaining information, and of forming a correct taste.

Composition-writing should be taught in accordance with a method. in which the rules of grammar and rhetoric, and some of the principles of logic, may be applied.

The study of numbers passes to the study of arithmetic, and the pupil is taught to apply general principles to the operations of business-life.

Practice in the use of language passes to the study of grammar for the principles of construction.

Geography is taken up as a science. Geographical facts are taught and referred to their causes. A method of classifying plants, minerals, and animals may be taught. Not much time should be spent in this work,—simply time enough to teach a method of classifying. The pupil can use the method after leaving school, and without a teacher. Chemistry and physics may be taken up in a similar way. The laws of health may be taught under the topics Physiology and Hygiene. Penmanship may be taught in connection with written composition, and book-keeping with arithmetic.

If the pupil remains in school through the course marked out for his third stage of development, he may take some lessons in geometry and algebra, and devote some time to the study of ancient and modern languages. As language holds the relation of signs to our knowledge, and is the means by which we preserve our knowledge and communicate it to others, language should be taught and learned in connection with the acquisition of knowledge. All the lessons taught may be called language-lessons; for a complete knowledge of the forms and use of language implies a knowledge of all that which is to be known.

It should be the aim of the teacher in all his teaching to communicate knowledge, by which is meant to lead the pupil to acquire knowledge for himself; to teach a good method of study, and to give a proper training to the whole nature of the child.

The industrial element of education should be introduced in some form, so as to turn the attention of the pupils toward work while they are passing through the schools, and so as to make it appear most honorable in their eyes. Moral lessons should be constantly given by presenting examples of good conduct, and by calling attention to the moral quality of actions.

Signed by the Committee:

J. W. Dickinson.
N. A. Calkins.
D. N. Camp.
S. S. Greene.

BEARINGS OF FROEBEL'S WORK.

BY W. N. HAILMANN.

There can be no doubt in the minds of calm observers that foolish exaggerations and extravagant claims concerning the character and nature of Froebel's teachings on the part of over enthusiastic friends, have done much to injure his cause in the eyes of sober, thoughtful people, who, while eager for progress, distrust revolutionary proceedings. A careful study of his teachings in the light of the history of educational thought and practice, will convince the earnest seeker that Froebel is the logical outcome of his time, that he rests firmly and closely on the attainments of his predecessors, that his aims lie fully within the possibilities of the race, and coincide completely with the aims of a rapidly advancing humanity. There is nothing in his teachings that is mystical or mysterious, or so complex that only a few gifted natures can ravel it; nothing that had not been thought of in some cruder form by earnest educators long before he organized the scattered thoughts into a living, beautiful whole.

I need scarcely insist that this intimate connection of Froebel's thought on education with the best thought of all times, this continuity of his work with the best work of the past, instead of lowering his merit, rather proves it and insures its permanence. Is Galileo's glory lessened by the fact that Aristarchus taught nearly 2,000 years before him that the earth moved round the sun? Does the fact that Plato had notions of universal gravitation diminish the noonday light of Newton's discovery? Is our debt of gratitude to the great Watt reduced by the fact that Hero of Alexandria used steam as a motor, or even by the fact that his steam-engine is but an improvement of the Newcomen engine? Or is the name of Herbert Spencer rendered less illustrious by the speculations of Democrites of Abdera, in which we find a strangely clear insight into the laws of evolution?

Similarly, it is one of the chiefest glories of Froebel's name that his truth is foreshadowed, that his coming is heralded, as it were, by all great thinkers on educational matters from Plato down to Comenius, Rousseau, and Pestalozzi. Confining our view only to the last two, we are struck with the continuity that runs through their work and Froebel's. Rousseau asserts the individuality of man, and bases all education upon it; Pestalozzi teaches that for education, individuality is a growth, and illustrates this in intellectual education; Froebel vindicates for this growth universality, all-sided life; and shows that this individuality is of no value unless it "lives in free unity with mankind, with nature, with the universe, with God." Do you not see the chain? *Be, Grow, Live!* Rousseau vindicates to man the right to *be;* Pestalozzi teaches him that the royal road to the enjoyment of this being lies in *growth;* and Froebel adds value and dignity to both by his earnest, cheering demand for all-sided, unified *life* in the various phases of being and growing.

Accordingly, Froebel's chief characteristic lies in the fact that he translated theories into practice; he removes the more or less vague hopes and yearnings of educators from the shadowy realms of dreamland to the rich fields of reality, and discloses modes of procedure so simple and efficient that he might be called the Morse of pedagogics. Unquestionably, this implies, on his part, a clearer insight into principles, a more comprehensive view of the field to be encompassed, a more just appreciation of relative value, than was found in his predecessors and contemporaries; and, indeed, the perusal of his writings,—although, in view of his remarkably active life, many of them were almost hastily composed,—throws a flood of light upon questions formerly considered abstruse, rendering them perspicuous to the common mind and dear to the common heart.

The entire work of extraordinary men usually hinges upon some simple, almost axiomatic, principle of which they never lose sight, on which their eyes are fixed, as the mariner's eye upon the beacon-light. This, in Froebel's case, is the principle of unity. "In all things," he says, "there lives and reigns an eternal law. This law is enounced with equal clearness in nature, the external; in spirit, the internal; and in life, which unites the two. This all-controlling law is necessarily based on a living, all-pervading, energetic, self-conscious, and, hence eternal, unity. This unity is God. The divinity that is in each thing constitutes its essence. It is the destiny and life-work of all things to unfold their inmost essence externally, to reveal the divinity that is in them. Education consists in leading man, as an intelligent, thinking being, growing into consciousness, to a pure and unsullied, free and spontaneous representation of the inner law, of the divine in him. Education must lead and guide man to a clear insight into his own nature, to peace with nature as a whole, and to unity with God." And elsewhere he says: "Education must lead the child, must lead man to unification with life in all directions; it must lead him to full unification with his kind, with his neighbor, with society; it must lead him to the greatest possible unification with nature and her laws; it must lead him to indissoluble unification with the principle of all being, the alpha and omega of life,—with God."

Of this lofty principle so clearly set forth by him, Froebel never lost sight in any portion of his educational scheme, at any moment in his busy life. Whether playing with the little children in his kindergarten, or instructing the pupils of his highest classes, preparatory for entrance into the university, this principle was his guide and criterion. It will be noticed that it contained nothing new in itself; but his full, clear, consistent translation of the principle into life and into the work of education was new, and is even to-day so very new that many, very many, fail to appreciate its great importance.

I shall select a few of the more prominent features of his scheme for the purpose of illustrating this single-hearted fidelity of the great teacher to a ruling thought. One of these is the bountiful provision for the all-sided self-activity it contains,—not the sickly quality which goes by that name in an ordinary school, where we may still find teachers with such extraordinary penetration that they can discover self-activity in a poor little child sitting for hours with arms folded behind the back, straining its poor tender nerves to the utmost to keep still, and pretending attention, doing (?) all it can to follow the rules; but a vigorous, healthy quality that fills the very atmosphere of the room with joy, a quality that shows itself in cheerful countenances, sparkling eyes, merry songs, child-like laughter, and other equally preposterous tokens of life, and strength and healthy development.

There is, indeed, a vast difference between the self-activity of Pestalozzi and that of Froebel. The former has reference more to acquisitive or learning processes that fill the memory without expanding or freeing the mind; it means long lists of names, series of dry, verbal facts, sets of formulas; it reduces the child, even in object lessons, to the condition of an answering machine or a repeating contrivance; and abuses reading, writing, drawing, and even singing, for purposes of mere imitation. Froebel's self-activity applies to the whole being. He would have all the child is, all that is in and about the child, self-actively growing, simultaneously and continuously,—the physical as the substratum of the psychical, the psychical as the essence of the physical, giving it meaning and value. Froebel looks upon the child as an individuality, distinctly separated from all the manifold individualities that make up the universe, but with an all-sided, instinctive yearning for unified existence with all these, with points eager for contact, as it were, in all directions of being.

He reduced the phases of existence, so far as the human being is concerned, into two vast currents opposed to each other in direction, but together forming a great circulation of mutual influences steadily growing in depth, width, and comprehensiveness. On the one hand there are from all sides currents of influence inward, resulting in insight, in understanding; on the other hand there are in all directions influences going outward, attempts to modify and control the surroundings for purposes and ends that have their origin within the human being, resulting in efforts to *do*, in all the various transforming, applying, creative, and productive activities, which alone entitle man to assume the proud name of *Lord of Creation*. These outward activities, in which the mind is concerned as fully as in the inward activities, by which mere knowledge is acquired, constitute in the aggregate the various forms of *work*, using the term in its widest sense. They were so sadly neglected in all educational schemes before Froebel, that work, which is indeed the noblest pursuit of man, has come to be considered as inferior to the more passive functions which, in their aggregate, constitute *learning*. Education is indebted to Froebel for its rescue from this pernicious error. It is true that work itself, by its own innate power, and in spite of its neglect by this school, had long before proved its superiority over mere learning in matters of blessing mankind, in the triumphal progression of all the various arts from earliest times down to the latest, and notably just before its vindication by Froebel, in the achievements of the steam-engine, illuminating gas, the railroad, the telegraph, and of mechanical arts generally; but to Froebel we owe its vindication for the school.

This should be kept in mind when we judge of the progress of our schools. If we dispense with the excessive use of text-books, and teach the children to use their own powers self-actively in the acquisition of ideas and in their verbal expression,—this is not Froebel, but Pestalozzi; if we throw aside the rod, and rely for progress and discipline upon our powers to make the school attractive and intensely interesting to our pupils,—this is not Froebel, but Richter or Diesterweg; even the "new education" of Quincy is not Froebel, but Pestalozzi and Richter and Diesterweg fertilized by the singularly humane and eminently practical spirit of our Republic, as personified in its supervision. Only when we shall have enabled the pupil at every stage of school-life to unfold all his new ideas at once in outward, plastic, practical life; to make use of every principle recognized in raising his life at once to a higher level of enjoyment and usefulness; to give full and satisfactory expression to his thoughts and feelings, not in *words* alone, but in *deeds;* only when drawing, modeling, carving, and all that is implied in Froebel's idealized workshop and school-garden, shall have become part and parcel of the school; only when we shall have thus satisfied his great principle which calls for the "unfolding of the child's inmost essence externally," shall we have introduced the self-activity of Froebel.

Another prominent feature of Froebel's educational scheme we find in the importance he attaches to the cultivation of the emotions. The corner-stone of his educational scheme is the family. The family in its completeness,—father, mother, and child,—is to him the "holiest of holies of humanity," the conscious triune molecule of society. Father, mother, and child he likes to designate as the human personifications of light, love, and life,—light predominating in the father, love in the mother, and life in the child; now, as in the family, the mother,—love,—is the center and fulcrum, so in man, the heart, the feelings, furnish the center, the fulcrum of life. Hence the importance of heart-culture; hence the vast significance of human motherhood; hence the need of preparing mothers for the weighty work of giving direction to the child's being; hence the value set by him on music as an educational factor. What, indeed, are head and hand without the controling, guiding influence of the heart? This is in full keeping with his primary principle. The emotional element of our being, the heart, is surely nearest to the "divinity" within us; head and hand are but the instruments of the heart in attaining our destiny, which calls for the "external unfolding of our inmost essence"; the heart alone can give to the head and hand the direction that leads to "unity with our kind, with nature, with the universe, with God."

The same fidelity to this great principle of unification leads him to supply another sad deficiency in educational schemes. The importance of society to man has been sufficiently conceded to enable him to figure in definitions as a "social animal"; yet in the educational practices of home and school this phase of man's nature is wholly ignored; nay, it seems that both home and school are rather intent upon counteracting whatever social instincts there may be in the child's being. To the mother, the child is *her* child, and her solicitude rarely extends beyond this; in the school, it is *a* child, like all the rest in its care, and the aim seems to be to make, at best, a tolerable *average* child of it. The mother cannot be blamed, in her view of the case, because she has not the means, does not control the proper surroundings to train her child for life in a society of equals, and because, indeed, her special province is the nursing of the earliest germs of individual character which underlie the future social value of her child. With the school the case is different; here the elements of a society of equals are given, and yet these elements are kept studiously apart, and not infrequently a hostile emulation is fostered, disintegrating in the school-room what may have entered into tolerable union in the play-ground. Froebel asks that the school in all its work should take the claims of social nature into account, that opportunities should be constantly offered for common enterprises, for purposes whose attainment needs the union of many. Only in this way men will learn to appreciate the value of society to them, as well as their own value to society; only in this way will they grow into that generous self-assertion, that rational self-sacrifice (wholly free from sentimentalism) that shrink from no duty and yield no right.

However, Froebel went farther. He was not satisfied with stating the desiderata; true in his own life to his great principle, he proceeded to "unfold his inmost essence externally." His writings are full of practical hints and directions, advice and experience on this subject; his own schools at Burgdorf, at Keilhau, and at Blankenberg were progressing approximations to these ideals. The kindergarten, too, or child-garden, the most widely known of his creations, finds its leading justification as an indispensable factor of an ideal education, in the fact that it is almost specifically the nursery for the social phases of childhood; an ideal society of equals, provided at the very moment when the social instincts enter the stages of consciousness; a preparatory school where alone the future citizens,—be their parentage high or low,—can learn the arts of coördination and subordination, of creating and directing leadership, of intelligent and cheerful helpfulness in the attainment of common purposes.

Thus it would be an easy and a pleasant task to show how, in all the various phases of his extensive work, embracing the entire business of ante-university education, he never lost sight of his great principle of unification and of the unfolding of our inmost essence in our external lives.

How strange! A hundred years ago he entered the world, a motherless boy; shortly afterward he lost his father, too, through the second marriage of the latter. Knowing the love of mother and father only by its absence from his life, as it were, only by his great, unsatisfied longing for it, he became one of the most eloquent teachers of mothers and fathers, teaching them a love for childhood which, in intensity and comprehensiveness, in unselfishness and wisdom, will be the ideal of coming generations. Scarcely thirty years ago the world began to heed his call, and to-day millions of all nations honor and bless his name. Is it, indeed, strange? Is it not, rather, due to the fact that the bearing of his work and of his life,—with him synonomous,—lie wholly and fully within the great onward and upward drift of growing humanity?

May our homes and schools continue to grow in their appreciation of his call, until, with their help, light, love, and life, in generations to come, shall have freed themselves from the dross that encumbers them now and hides them from view; until in all the phases of being, men may learn, with their help, the divine art of "unfolding their inmost essence in their external lives"; until, through their agency, humanity shall learn to see, to love, and to live Froebel's great principal of unity.

SELF-CONSCIOUSNESS IN EDUCATION.

BY REV. E. T. JEFFERS, D.D.

It may be taken for granted that Pestalozzi's idea of education is correct; viz., "The natural, progressive, and symmetrical development of all the powers and faculties of the human being," and also that much that passes for education is unworthy the name and fails of this end; and, on the other hand, that all education is, at best, relative; that we never reach absolute perfection; that that method and course of study may with comparative accuracy be called educational which gives the strongest impulse in the right direction and carries the student the farthest on his way.

With a bare mention we may lay aside the two popular meanings of self-consciousness, both that which makes it equivalent to egotism and also that which describes the power which we would prefer not exercising,—the power of keeping one's self bodily before his mind when he would much prefer forgetting himself.

Without attempting to fix, except while we are discussing this subject, the meaning of this much-defined term, let us agree that it is the power of introspection. Consciousness, as defined by Dr. M. Hopkins, "is the knowledge by the mind of itself as the permanent and indivisible subject of its own operations," (*Outline Study of Man*, p. 106). Self-consciousness is used in this paper about as Dr. Porter uses consciousness: "The power of the mind to know its own acts and states," (*Human Intellect*, p. 83). It is called often, figuratively the inner sense, sometimes the seventh sense. Sir William Hamilton says, "Self-consciousness is the power by which we apprehend the phenomena of the internal," (*Metaphysics*, p. 401). By self-consciousness, then, we can agree to mean the voluntary and direct knowledge of self, the power to know psychical phenomena directly and intentionally. If I am asked, "Do you admire Longfellow as man and as poet?" because I have the power of introspection I answer confidently, "Yes, I do." If asked, "Do you understand Emerson?" I can say, "Not always." But I have my own opinion of Emerson, something like that of Socrates concerning Heraclitus: "What I understand of him is very good, and I'm willing to believe the same is true of what I do not comprehend." Again you ask, "Do you know the difference between right and wrong?" I inquire within. I know the difference between utility and inutility,—that is not it; also, between beauty and ugliness,—that will not meet the conditions of the question. But in my mental possessions I find a knowledge of the difference asked for, and also the difference between this difference and the other differences. I know all thoughts and feelings, all mental acts and states, before they find any expression whatever, and know them by the power we agree to call self consciousness. My aim in this paper shall be, not to defend this definition, nor to enter into any abstruse discussion of psychological facts or questions; but giving self-consciousness its place as one of the powers of the "human being," which must be developed in education, show what part it plays with teacher and pupil, and also, practically, suggest some means and methods for its development.

I.—CONCERNING THE POWER ITSELF.

Since this power of direct and voluntary self-knowledge is that by which we gather the facts of psychology, some might suggest that it would be as well to make this a discussion of the value of psychology in education. But attention is directed specially to the power rather than to the material or the products. While it will be impossible to avoid reference to the science of mind and the phenomena of mind, yet we shall not forget that we are to examine particularly the power that is indispensable in furnishing the facts on which the science is built.

1. Self-consciousness is a power of the human mind. We are endowed with the ability to know psychical phenomena just as we are with power to know physical phenomena. "Introspection is observation, differing only in that the phenomena observed are subjective states and feelings, and not objective states and changes in the felt. We observe changes of feeling no less than changes in the external; and whatever place is assigned to observation in scientific methods must, on this ground, be assigned to introspection," (*G. H. Lewis: Study of Psychology*, p. 82). The same author says, again, answering Comte's assertion that the human mind is incapable of observing its own phenomena, "How, then, in the name of common sense, have we become aware of the existence of mental phenomena?" Let those who will, puzzle themselves with the question, "How can the mind think itself thinking?" the fact remains, that among the potencies of the soul is one which enables it to investigate and take full cognizance of its own acts,—its thoughts, emotions, and volitions, and in general its states. For the present let us be positivists, and be satisfied with facts without attempting

an explanation. Further, the question, whether or not every psychical state or act is preceded by a nervous change, or followed by one, or accompanies one, it is not necessary to discuss or attempt to answer. In whichever way it shall be answered, when a demonstrated answer is reached, it will not affect our faith in the fact that this power is possessed by the human mind,—the power to know itself.

It should be remarked, by the way, that the field for the exercise of this power is narrower than it was supposed to be by the ancients, who thought it sacrilege to dissect this mortal frame, and who appealed to self-consciousness instead of to physiology to decide questions concerning the action of heart and lungs. We may add, too, that the observations of this introspective power are steadied and helped and corrected by modern accurate physiological investigations. Yet there remains a field purely psychical, and a mass of facts of which we would be utterly ignorant but for self-consciousness, and for which, and for the accuracy and nature of which, we must always appeal to this unique power.

2. This power, like all other natural powers, is reliable; in its own sphere, infallible. If the facts of self-consciousness are not distinct in outline, they gain in certainty what they lose in definiteness. If we do not question the facts of vision, of taste, of touch, much less can we doubt those of knowledge and feeling. To discredit the senses threatens all the physical sciences; to distrust consciousness is to take the foundation from all knowledge. When the world becomes seriously skeptical as to the reliability of self-consciousness, we shall be universally, and in the grossest sense of the word, agnostics.

3. Just like other powers, self-consciousness is dwarfed by neglect and developed by legitimate use. To gain knowledge, develop the mind, enlarge the sympathies, strengthen the will, to furnish material for the exercise of the faculty, is one thing. To exercise the faculty on this prepared material, quite another. The world is full of beauty; yet, in the multitude, the æsthetic faculty is unused and undeveloped. So we find men with well-stored minds who yet have never exercised this self-knowledge. Some, and not a few, like Comte, who have spent much time in using their powers of observation of other things so exclusively that it is possible for them to deny the existence of a power of introspection. On the other hand, it can be developed to a degree so disproportionate that sense-objects will be denied their true relative place, and the man, however excellent in character and purpose, will be manifestly one-sided. Socrates, *e. g.*, who could gain neither pleasure nor information from nature, has left us the most thoroughly analyzed products of introspection.

Kant makes this power the characteristic of rationality. He says if a pig should ever reach that degree of self-consciousness that would enable it to say, "I am a pig," and understand the phrase, he would no longer be a pig. Whoever knows himself most thoroughly rises highest in the scale of rationality.

II.—CONCERNING THE RELATION OF SELF-CONSCIOUSNESS TO EDUCATION.

1. Recurring to the idea of education with which we started, it is evident that this, being one of the "powers of the human being," must receive attention and care enough to insure its "natural and progressive development" in order to the symmetrical product which education yields. Any course of study that does not provide specifically for the training of this faculty is defective, if it pretends to educate. The institution that offers any such partial course cannot be called, properly, educational. Students, trained however thoroughly in other respects, have been defrauded of an element of culture who have not been subjected to that course of mental discipline that develops self-consciousness. The investigation of physical phenomena, important as it is,—and we are only beginning to estimate it rightly,—requiring the exercise of perception, memory, imagination, comparison, analysis, and generalization; assisting as it does in the exploration of the border-land between the purely material and the purely psychical; important as it is as an element of education, can never become the exclusive educator. Nor is it, nor can it ever be, more important than the investigation of mental phenomena and the consequent development of self-consciousness.

Schools which do not profess to educate, but only to train their pupils for some special or technical work, are, of course, under no obligation to develop the whole man. For many professions no special need is felt for this faculty in any great degree of strength. Yet, whatever the technical character of the school, from a theological seminary to a machine-shop, it should be pervaded by an educational atmosphere. Every teacher of every sort should inspire every pupil with a desire to be something more than his profession demands, to be broadly complete rather than narrowly successful. No university or college can afford to allow men to carry its degrees without some considerable development of self-consciousness.

2. The educator himself should have this faculty in perfection, both because he should be no mere specialist, no one-sided man, but a many-sided one; educated, when judged by Pestalozzi's standard; and also because this faculty is of special service to him in his professional work. Dr. Porter (*Human Intellect*, p. 11) makes the habits and

knowledge which come from intelligent self-study the source of answers to questions the profoundest and most difficult that the true educator meets in his important work. It lies on the surface to say that the teacher that best understands himself will take the most intelligent view of his pupil; and the conclusion is easy, that voluntary self-knowledge is the characteristic of the successful instructor, and development the first principle of pedagogics, and an essential feature of every normal school and normal course. The ill-taught teacher fosters peculiarities in his pupils and overlooks essential faculties; suppresses worthy aspirations and encourages little ambitions; and if there is any force in the teacher, makes every one of his graduates ten-fold more the child of one-sidedness than he is himself. He has hobbies, pet notions and methods. He is merciless on everything that does not fit into his queer mould and sows broadcast seed that raises a harvest of disagreeables and incompetents,—educational cranks.

The teacher, on the other hand, with self-consciousness well trained, perceives the defects in himself and corrects them. This experience is of service to him in correcting the errors and developing the excellencies of his pupils, but of infinitely more use in giving him patience and perseverance in his instructions, and in making him charitable and just in his treatment of those under his instruction. The products of his instruction will not be perfect, but they will be less imperfect than when he found them, and with a working model before their minds and a vigilant observer within that will insure future progress toward ideal beauty and excellence.

III.—CONCERNING THE DEVELOPMENT OF SELF-CONSCIOUSNESS.

1. To the question,—which is of importance if the propositions laid down thus far are true, How can this power be developed? the most obvious answer is, By use. To increase the power of introspection, introspect! Examine persistently and systematically the intellections, emotions, and volitions of your own experience. Take an account of stock, mentally, often. Let time,—a fair proportion of time,—be given to this exercise. Let psychology, with this object, have a place beside the other ologies. Let it have as much attention as any, and more than most of them; more than physiology even, because the soul is more characteristic of the man than is the body; especially more, because in all the others the other faculties of the mind are directly exercised, and in this alone is the power of self-knowledge used directly and by intuition.

I have referred to the study of psychology. It is necessary to say in this connection, that it is possible to carry a class through a text-book in this science with as little advantage to this special faculty we are discussing as would be gained from the use of a text-book on geology. A well-educated educator will develop in his pupils more self-knowledge in teaching mathematics than a mere hearer of recitations will in his pupils, with the best text-book on Mental Science. Where text-book, lectures, and oral instructions are so used as to provoke the exercise of the student's own powers in observing and verifying facts, the subject is interesting, and is pursued for its own sake and from the stimulation of growing powers.

Children cannot be taught too early to observe their own mental states, though they should be taught judiciously, lest they follow an abnormal growth of this power, which is as unsightly and as hurtful as any other disproportionate growth. The older, maturer, and better trained the minds of the pupils, the more attention they should be required to give to subjects that will directly exercise, and naturally and progressively develop self-consciousness.

2. This direct use of self-consciousness attains its best results when accompanied by an indirect use of it, in the study of the products of other minds; but those products, in order to contribute to the vigor of this faculty, must be interpreted,—estimated by your own mind. Without a vigorous use of self-consciousness, the study of the psychical products of others will degrade one to the level of an encyclopædia. On the other hand, a persistent use of self-consciousness, without a large acquaintance with others' thoughts, will give no reliable knowledge of mind in general, nor of the thinker's own mind even, but only a magnified view of his own most prominent mental characteristic. Returning from the contemplation of other minds, as seen in their varied products, he views his own in the light of his observations. Thoughts, motives, feelings, impulses that have been under the shadow of greater, *i. e.* more fully developed ones, are now brought to view. Vividness of outline is now given to ideas that before were of the vaguest description. By comparison, the mental facts that are universal and characteristic of the race are distinguished from those that are personal and accidental. "By striking off what is individual in each, we may get at a conception of what is common to all . . . . By including various races of men, ... we rectify in some measure the deficiencies inherent in introspection and reach the solid data for a general science," (*G. H. Lewis: Study of Psychology*, p. 97). Yet, after all, the data given us for our science are our own, and are given by self-consciousness, directly, though gained elsewhere indirectly.

Some studies may be named that are of special assistance in this direction:

1. In General Literature: The ancient and modern classics of all nations contain the best thought of the best minds. The survival of the fittest has saved us the trouble of weeding out the worst. Whoever makes the gems of general literature his own, knows himself in the light of all thought.

2. The Study of Language, and especially of languages: What better revelation of a nation's mind than in her language? How better trace the growth of intellect and emotion than in the coining of new words and in the change of meaning of old ones? The thought of old nations has been stereotyped for our study, and thence the thoughtful draws much self-knowledge. A comparison of languages is a long step toward the induction that reveals mind to itself.

3. In poetry we are permitted to look into the heart of humanity. The intelligent study of poetry reveals to us ideas of truth, honor, love, devotion, patriotism, beauty, justice, which may have lain dormant in our hearts hitherto, which it needed these words of the seers of the generations to discover and bring to the light, and which we now see as our own. The gross statement of the result of such study is, the student gets, acquires, or adopts ideas from the poet. The true statement has been given,—where the study is rationally directed, he knows himself better. His power of self-knowledge has been quickened and developed, and this is the best and most permanent result.

4. In the study of philosophical history, in which the student is led behind the scenes and permitted to look on the motives that lay behind wars and revolutions, and to study the personal feelings that were active in the formation of creeds and constitutions, this power of introspection receives large accessions of strength. While discovering the common clay in the hero, marks of total depravity in the Christian reformer, we find redeeming features in the "wisest, brightest, meanest of mankind;" and we find these characters, in large print, what is scarcely legible in our own hearts till after the reading elsewhere, thoughts and feelings that were always our own, though not seen till now.

5. None have been better assisted in developing the power of self-consciousness than those who have used intelligently the proverbs of Solomon and the Epistle of Paul to the Romans. Certain phases of our being, certain psychical facts, moral and spiritual, effectually hid by our pride, are brought out here distinctly and forcibly. A healthy

tone is given instantly to this introspective power when it breathes the air of these keen, crisp sentences.

6. One study, which in some respects deserves the highest place here, but which has heretofore received less attention than it merits in our institutions for higher instruction, is the *History of Philosophy.* In every generation there have been men,—earnest-minded, patient, thoughtful, strong men, who have studied the problem of the universe and have given us, in philosophical systems, the results of their investigations and meditations. These are sometimes referred to as cobwebs which should be brushed from the mental walls by all good psychical housekeepers; as mists that obscure the clear light of the nineteenth-century scientific sun; as fine-spun nonsense that belittles the mind that attempts to follow their threads of thought; and young men are exhorted to give their time to something useful, *i. e.* something that will yield a return of six per cent., rather than waste precious hours and years on these effete theories. One who has given us the most readable history of these systems, and knew them well, says of his history: This may be the history of mistakes but not of follies; and adds, we trace in their defects the cause of future victory. I do not refer now to the many advantages gained by a study of the *History of Philosophy*, as I did not to the profit of the other studies named. I say nothing now of the charity which this gives us for noble thinkers in all lines of investigation; of the gratitude developed when we see how much advance we have made on these old worthies,—gratitude to them often, for our position where we discover that we see farther than they did only because we stand on their shoulders; of the satisfaction of discovering that many of the wonderful new theories of things are only some old Greek's cast-off garments patched up with actual discoveries in physical science,—new cloth on old garments, with the traditional consequence; of the pleasure of discovering Hegel an eclectic, Leibintz a Pythagorean, Schopenhauer a sophist, Darwin a son of Democritus; of the stimulus given to our thought by contact with the thought,—the best thought of the generation, the thought of

> "The great of old,
> The dead but sceptered sovereigns who still rule
> Our spirits from their urns."

I refer to it here chiefly to show that it increases the power of self-knowledge. We read our own thoughts in the light of these brilliant speculations; we learn the possibilities of human thought both in the errors and in the correct notions of these Greeks and Germans. No theory of theirs, however wild, but has its possibility in every mind. We may speak of the peculiarities of the Greek mind, of the Hindoo and of the Teutonic mind, but they are all human minds; and we must say in a sense different from that in which it was first uttered, "Nothing human is alien to me." So in each system of philosophy, as in the large maps of special parts of a country,—parts scarcely noticed in the general map,—we find some part of our own minds fully explored, clearly marked off and described; nothing down on the chart which is not in the mind, but much that but for the service of one whose theories are regarded as fit only for an intellectual museum, would never have been brought above the horizon of self-consciousness; but much that is of value to us because it is ours, and of great practical value when developed with other powers, discovered and used in accordance with their nature. So we may say, without exaggeration, that no man knows himself who does not know Socrates, Plato, and Aristotle; Des Cartes, Spinoza, Leibintz, Kant, Hegel, Van Hartman, and Spencer; Locke, Reed and Hamilton; and the other thinkers whose theories mark stages in the development of human thought.

I cannot close without emphasizing this notion, already expressed, that whether the study of these branches, and especially the last, shall yield only dry bones that no prophet's voice can inspire with life or clothe with flesh, or shall awaken living thoughts that can never die, will depend on the method and spirit of the instructor. While all, even the Bible itself, can be so studied as to make men narrower and more bigoted, all can be studied so as to teach us that while in the presence of God we are utterly insignificant, yet essentially we have powers capable of infinite results under a development that is natural, progressive, and symmetrical; and, further, that in order to insure a development that shall be natural, progressive, and symmetrical, there must be, first in the teacher and then in the pupil, a clear, vigorous, growing self-consciousness.

THE TECHNICAL EDUCATION OF WOMEN.

BY JULIA S. TUTWEILER, OF ALABAMA.

The true profession of every woman is that of Queen. For this she was created, to rule wisely and well over "A Woman's Kingdom," a well-ordered home. A wise Providence makes provision for carrying out this design of woman's creation by causing the number of births of males and females to be nearly equal in every land, with a small excess of male births to allow or the more frequent deaths among men, owing to their more exposed lives.

But an artificial civilization often overrules the laws of nature, and there is a tendency in the men of all civilized countries to seek newer lands, less thickly populated than their own. Women, not having the same liberty of action nor the same capacity for bearing hardships, leave the older lands in smaller numbers, and, consequently, among those left behind the majority are generally women. This migratory instinct plays a valuable part in filling with inhabitants the desolate regions of the earth, and it will doubtless continue to act until all parts of the world are equally settled and equally fruitful. As such a state of things will hardly take place until the millenium, we may for all practical purposes consider the present condition of civilized lands as their normal one, and discuss the question, "What is to be done about it?" for this disproportion between the male and female population not only *exists* in all the older civilizations, but it is constantly *increasing*. The United States formed, in earlier times, an exception to this rule, and this country was consequently considered as the paradise of women; but at present, in all the States except those in the extreme West, the women outnumber the men. In Massachusetts the band of "forty thousand anxious and aimless women," mentioned in the address of a former governor, has become a by-word. Even in so new a State as Alabama there are said to be ten thousand more women than men.

Now these women must be either *consumers* or *producers*, for every inch of shelter we use, every grain of food eaten, every thread of clothing worn represent *labor* expended somewhere and somehow, either our own or that of another. Most of these women desire to be producers; they would prefer to feel that they are not mere drones in the social hive, living upon the honey gathered by their more fortunate comrades, but useful and necessary members of the community, adding to its material and immaterial wealth. This condition must be the happiest, since one of the blessings promised to the righteous is, "Thou shalt eat the labor of thy hands," not that of another's hand. Just here let me say, that the wife who manages her husband's household, and the daughter who takes charge of that of a lonely father, are as truly producers, self-supporting members of society as the teacher or milliner. We are speaking now of those women upon whom no such sweet and sacred duties devolve. To be self-supporting is not merely the preference of many women, but a stern necessity laid upon them. While a few women may be found in other departments, there are practically but two vocations really open to women in the South, *teaching* and *sewing;* consequently, both of these are miserably overcrowded and wretchedly paid. The want of other avenues of occupation for our women is an urgent one. "How I envy you the consciousness of leading a useful life," said a Southern lady of culture and refinement to me the other day. "I can find nothing to do," she went on, "which will prevent my being a burden on others. I was not educated with the thoroughness required of teachers now-a-days, and, while I can sew as well as most ladies, the colored girl in the cabin across the road can do this so much better and more rapidly than I that I cannot compete with her, even in this so ill-paid an occupation. I would give all that I was taught in my school days in exchange for the knowledge of some one thing by which I could feel that I was self-supporting,—useful to myself and others." Sad enough words to come from one woman's lips, but when these are the unvoiced utterances of groups of unemployed girls in thousands of families who are withering away like clusters of sister-flowers on one stem, all the high possibilities which might have gladdened and enriched the world, unused and undeveloped within them,—how unutterably sad! Even for these two occupations, of which public opinion has tacitly allowed her the freedom, there are no full opportunities for proper preparation. The normal schools profess to supply this preparation for teachers, but their number is deplorably insufficient, and their work often that of a mere high school or college, instead of being strictly technical. To obtain preparation for all other occupations, individuals must use their own private efforts.

What is the remedy for this state of things? In what way shall we make available the vast unused capital of womanly intellect and energy that now, in defiance of all the precepts of political economy, is going to waste among us? I answer, *By the technical education of our surplus women;* that is, by teaching them thoroughly and well such arts and handicrafts as shall make them not only self-supporting, but contributors to the general wealth of the community. Let our girls who have no means be able to begin life as cheerfully and hopefully as their brothers, feeling that avenues of honorable labor are open to them in many directions, that there is a suitable place and well-rewarded work for each of them in the big world. How shall this technical education be provided for our girls? In other countries this has been done for the most part by voluntary associations and private benevolence. Three methods are in use: the first and oldest is that of apprenticeship,—the young girl being placed for a certain term of years in an establishment where the handicraft which she wishes to learn is pursued, and she goes through all the steps of its various processes. The objection which thoughtful philanthropists have found to this plan is, that it produces a very one-sided development, preventing, almost necessarily, the acquirement of that general knowledge and culture which is necessary to the ideal citizen; yet this plan is largely adopted in the old world. A second plan is to establish institutions where adult women, who have already received their school education, can, by the study and practice of a few months, acquire certain handicrafts. Such an institution is the Victoria *Stift* of Berlin, established under the patronage of the crown-princess of Prussia. The objection to this worthy mode of assisting women to be self-supporting is, that what is rapidly learned never permeates, and becomes as completely a part of one's self as that which is more slowly and gradually acquired. "Pour water on the sand rapidly, and it runs off; pour slowly, and it soaks in."

A third plan, and it seems to me the best of all, being free from the defects of the two systems just mentioned, is that adopted in the *Ecoles Professionelles* of Paris. These schools owe their origin to the efforts of a noble woman of France, of whom American teachers should know more, Madame Elise Lemonnier. They are sustained by the efforts of a society which she organized for this purpose. Of Madame Lemonnier herself I cannot here speak further, however inviting the theme. Of her work I will give a very brief account. During the revolution of 1848 thousands of the workingmen of Paris, whose families depended for daily bread upon the daily work of their fathers, were thrown out of employment, owing to the cessation of many large public and private enterprises. The *mothers* of the hungering children attempted to supply the necessity, but it was as difficult for them to find the ill-paid labor for which they longed as for their husbands to get their usual well-paid employment. Madame Lemonnier attempted to assist the suffering mothers around her by organizing, in connection with other benevolent ladies, a Labor Bureau, where work, such as they said they could do, was given out to all women who applied for it, and a regular, if scanty, support provided for them. Madame Lemonnier, herself a most skillful housewife and seamstress, albeit an early disciple of St. Simon, and an enthusiastic political economist, was surprised and distressed to find how many of the women who applied to her for employment were utterly ignorant of the simplest sorts of handiwork. Their hands were as clumsy and awkward as if they were tools of which they had never learned the skillful use. The simplest needlework given out, stitching by hand the covers for common mattresses, was found to be beyond many of them. Madame Lemonnier believed that she saw in this inability to perform any but the coarsest and heaviest mechanical work the reason, not only of much of the suffering and poverty of large cities, but of much of their degradation and vice. Herself a happy wife and mother, her warm heart yearned over the comfortless homes and hapless lives of so many of her countrywomen. It seemed to her a duty laid upon those women whose lives a good Providence had placed in shelter from want and care and degradation, to make some earnest effort to bring to their less fortunate sisters some of the same blessings. For some years, with the assistance of a few like-minded women, she selected promising young girls and placed them as apprentices to learn various handicrafts in institutions of France and Germany, paying all their expenses. In 1856 this work was systematized, and organized as "A Society for the Maternal Protection of Young Girls," *Societé pour la protection maternelle des jeunes filles.* Eighteen ladies met in the parlor of Madame Lamonnier, and organized themselves under this name. But the new society soon found the existence of the objection which I have mentioned regarding apprenticeship. The resulting working-women were too literally "hands." Neither head nor heart would receive systematic cultivation. As a result of this experience, the *Societé pour la protection maternelle des jeunes filles,* was changed in 1862 to a "Societe pour l'enseignement professionel des femmes;" that is, an Association for the Promotion of the Technical Education of Women. This society proceeded at once to open schools under its own care. The first one was opened, and began with six pupils. At the close of the scholastic year there were forty; at the beginning of the next year there were eighty; so that the school had to be removed to a larger building, where it now numbers two hundred and twenty pupils,—all that can be accommodated.

Three other schools have since been begun, with equal success. This rapid increase shows that these schools had met a deep-seated want. It should be remarked that this society must be credited, not only with the good done by the four large schools under its care, but also much that has been accomplished by efforts in imitation of theirs by other associations. For instance, the largest Protestant church in Paris, through the exertions of its pastor, M. Berrier, at present the most distinguished of French Protestant ministers, opened, during the year of 1878, a school of this character in buildings attached to the church. This school, to which I paid an interesting visit, is adapted to supply the needs of the lower and middle classes of society.

But women feel the need of being self-supporting, in the highest ranks as well as in the lowest; and I visited also a very fine institution designed to supply this need. In the institution dedicated to "Notre Dame des Beaux Arts," Our Lady of the Fine Arts,—the daughters of noblemen and government officials, reduced in fortune, and other decayed gentry, have the opportunity, among elegant and refined surroundings, to learn many beautiful and tasteful occupations, by which they can afterwards earn a comfortable support without going out from the shelter of their own homes. The painting of miniatures, china-painting, carving in ivory, wood-engraving, artificial flower-making, are some of the occupations which can be there pursued.

But to return to the regular *Ecoles Professionelles* of Madame L. Lemonnier, of which the two just mentioned are worthy imitations. The fundamental idea underlying the plan of these schools is, that it is possible to teach a handicraft while giving the pupil a good general education, and that this wider and more varied culture, far from interfering with the mechanical skillfulness of the pupil, will make her a better workwoman. The

Society had an exhibit of their work and methods in the Pedagogical department of the Universal Exposition of 1878 at Paris, among many other industrial schools of various countries. The highest honors, a gold medal and a golden diploma, were awarded to their display.

The course of study embraces three years; the literary course is that laid down by the French government for schools of the second grade, corresponding somewhat to our grammar schools. The pupil must be at least twelve years of age, and before entering must submit to a preliminary examination, that the Society may be sure that the advantages which it offers are not thrown away upon those incompetent to profit by them.

The hours from 8 to 12 o'clock are devoted to the usual lessons of a common school course, the pupils being divided into three grades of advancement. After an intermission the pupils reassemble, and the afternoon, until 6 o'clock, is devoted to instruction in the various handicrafts which the pupils have chosen to learn. Of course a different room is assigned to each employment. The number of hours spent in school would be too great if devoted altogether either to literary pursuits or hand-work, but is not too great for girls of this age when divided between the two sorts of occupations. In fact a school-day thus spent is far less hurtful than that of most of our older pupils in high schools and colleges, who spend six hours daily in the school-room, and devote from three to four hours in preparing their lessons and practising their music.

There are about ten different *professions*,—trades or handicrafts, as one would call them,—taught in these schools. Among these are book-keeping, including everything else necessary to a commercial education; painting on porcelaine; wood-engraving; artificial flower-making; designing patterns; painting window-shades, and other industrial and decorative arts. Millinery and dress-making are taught, and in such a way as to make of them fine arts. During a very interesting visit paid to one of these schools in Paris, in 1878, the writer was shown many beautiful articles made by the pupils. For instance, a silk fan, worth, perhaps, originally about fifty cents, had, by an exquisite painting of nymphs and goddesses, been transformed into an article of luxury worth from five to ten dollars. The articles shown to me were to be sold at a bazaar held once a year for the purpose of aiding the funds of the school by disposing of the work of the pupils. People who feel an interest in the noble work which these schools are doing often help them by giving orders to be filled by the more advanced pupils. The visitor was shown a set of window-shades in Japanese style, which had been ordered by a prominent member of the Government for his own residence. These articles are usually much more artistic than those furnished by the regular trade. This is a natural result of the fact that all the work of the school is done under the constant inspection and criticism of the ablest and most artistic masters that Paris can furnish; for the directors of this enterprise have found it the best policy to get the very best possible instruction for the pupils, no matter at what cost. Cheap instruction would necessarily be second-rate, and second-rate teachers would produce second-rate artisans, injuring permanently the character of the schools. The price of tuition in any one of the handicrafts taught is ten francs, that is two dollars, a month; if the pupil takes also the literary course, the charge is about two dollars and a half. Scholarships have been founded by benevolent individuals, and many pupils receive the whole or part of their tuition free.

Now it is not asserted that schools just such as these are what our country needs; for every land has its own peculiar wants. This account has been given to show how one country has dealt with this difficulty, in hopes that it may contain some suggestions worthy of attention. It would be hardly feasible to establish schools wholly of this character outside of a great city; but might not technical departments be added with good results to many of our existing high schools and colleges for girls? *All* the crafts taught in the schools at Paris would not be available here; but others could take their place,—short-hand writing, printing, book-binding, the finer kinds of confectionery work, wood-carving, could be added to the list.

The expense of such an experiment would be the sole obstacle; no private institution would be able to undertake it. But would it be unreasonable to ask the State or the Nation to assist in a work so much needed? In every State of the Union the State makes large provision for the *literary education* of its young men by means of State universities. In not one does it make any such special provision for its young women; at most they are permitted, and this only in some States, to *share* in the advantages prepared for the young men. *Technical education* for young *men*, in at least *two* pursuits, is provided by the *Nation* at immense cost in its naval and military academies. The *State* also provides for several kinds of technical education for young men by means of agricultural and mechanical colleges and normal schools. To the latter alone, in most cases, women are admitted. Neither the Nation nor the State has ever made any *special* provision for either the literary or technical education of its *women*. There is a manifest injustice in this, in regard to those women who are, like men, expected to be self-supporting. Naturally less strong physically or mentally than men, they would be able to compete with them in the race for a livelihood, even should they begin with the same previous preparation; with such odds against them as they have under the present system, it is not strange that so many women make failures when they attempt this competition.

The proposition that the State or the Nation ought to make provision for the technical instruction of those of its women who must be self-supporting is not a new one. It should be a matter of pride to Alabama, that one who belongs especially to us, one in whose fame we take a just pride,—our own senator, General Morgan,—was the first man in the United States to raise his voice in favor of this simple piece of justice to the women of his country. No one had ever proposed before, so far as I am aware, that even a few of the crumbs that fall from the national table should be thrown to woman. In an act brought forward by him in 1881, but unfortunately never passed, it is proposed as a condition on which alone the money obtained from the sales of the public lands shall be given to the agricultural and mechanical colleges of the land, that each of these shall be required to annex departments in which various branches of skilled labor may be taught to women. The act was not passed, but in this world, every failure is a step toward success, and in this proposition we see the first sign of an interest on this subject which will doubtless be translated into actions.

Then we may hope to see the growth of a healthier state of feeling, not only among men, but among women themselves, in regard to the nobility of labor. An Englishman once said that the difference between the Scotch and English universities is that the Scotch universities teach a young man how to make a thousand pounds a year, and the English universities teach him how to spend that amount. This is pretty much the difference between girls' schools as they now are, and girls' schools as they would be with these technical departments added. When this is done it is to be hoped that the girl who saves her father every year a thousand dollars of a salary once paid to his book-keeper will not be less esteemed than the young lady who spends for her father a thousand dollars a year.

We are sometimes referred to the life of woman in more primitive times as the model of what ours should be; and the rebukers seem to think that the women of old times were only housewives. But in the oldest description we have of the model woman of ancient times, we find her life far from devoid of large cares and interests. She engages in important, independent *agricultural* undertakings. "She considereth a field and buyeth it; with the fruit of her hands she planteth a vineyard." Besides supplying the needs of her family, she engages in *manufacturing* operations. "She maketh fine linen and selleth it, and delivereth girdles to the merchants." She is not unacquainted with the exchanges of commerce. "She is like the merchants' ships, she bringeth her food from afar." And for the women of later days we are asking now only the privilege which the wisest of men desired for that older sister of hers three thousand years ago. "Give her of the fruit of *her* hands, and let her *own* works praise her in the gates."

THE first article in this number of EDUCATION, by Z. Richards, of Washington, D. C., is part of an essay which received one of two premiums of fifty dollars each, from the American Institute of Instruction, at its annual meeting at Saratoga, 1882. The remainder of the essay will be published in the next number of EDUCATION, after which the whole will appear in pamphlet form for general circulation.

EBEN TOURJEE, Mus. Dr:

This number of EDUCATION is embellished with the steel portrait of Eben Tourjee, director of the Conservatory of Music at Boston. His name is well known in musical circles and by educational people generally, on account of his great interest in all that relates to the success of professional education. We gladly tell the story of Dr. Tourjée's life, for it seems to us the embodiment of three fundamental elements of the teacher's success. Carlyle says: "The first requisite of all teaching, that without which all other qualifications are nothing and worse than nothing, is that the teacher have, lodged in the silent depths of his own being, that which he would teach." One can inspire enthusiasm in others only as he is enthusiastic himself. No teacher can lift his pupils higher than his own head. Even the great Teacher was first lifted up himself, and then drew others to him. Very few teachers have been from the first a finer embodiment of Carlyle's requisite of success than the Huguenot man born in Warwick, R. I., in 1834. When a mere child the ringing of bells and the tones of an organ filled his soul with delight. If we accept Emerson's motto, that one's talent is his calling, this boy's work was marked out for him from before his birth. Born poor, he had the stern, hard obstacles to overcome which called out his talents and demonstrated to others their existence. At eight he went to work in a factory at a shilling a day. At nine his wages were advanced to $2.25 a week. At eleven he became a Christian, and joined the church; and so marked was his musical talent, and so correct his ear, that he was generally called upon to pitch the tunes in the Sunday-school. At thirteen Governor Harris, who was then his employer, handed him the key to the church organ one Wednesday evening, with the remark, "Our organist is to leave us; I wish you would learn to play as soon as possible." With never a musical instrument to play on; with no teacher to guide his hands, and with fingers already growing stiff with toil, the boy yet sat entranced by the very tones of the organ that memorable Wednesday night, and found his learning, in the language of Cicero, more like a recalling of what he had known in some other sphere than the mastery of a foreign subject. Despite his hard days' work, Thursday night, Friday night, Saturday night, found him late at the organ, and on Sunday he played for the choir "Greenville," "Chimes," "Naomi," and "Lanesboro," with such success that he was appointed organist. He was not flattered into contentment by his early victory, but went to Providence, thirteen miles distant, sometimes on foot, for musical instruction. By rigid economy he saved enough from his weekly wages to start to East Greenwich to school. Then, by sweeping rooms, ringing the bell, and outside work, he maintained himself for some time and took a high standing in his classes. But America has thus far been full of openings for boys of his pluck and energy, and at fifteen he was offered, and accepted, a clerkship in a store in Providence, which was still his musical Mecca. The few hours snatched from the store and from sleep, which time many a boy spends in loafing, seemed to young Tourjée to afford boundless opportunities for culture. He advanced so rapidly, both in business and his art, that at seventeen he opened a music store in Fall River, and became editor of a little paper called the *Key-Note*, which he soon enlarged into *The Massachusetts Musical Journal.* The move to Fall River afforded him means to study under the best masters of Boston, which was then, as to-day, the musical metropolis of America. Here he organized his first classes for teaching the piano and singing, as now taught in the Conservatory. Later he removed to Newport, and under the demands which his improved system of instruction made upon him, his ideal continued to advance, and later he crossed the Atlantic, seeking the best musical instruction of the old world. He gradually became familiar with the best music schools of Paris and Germany, with an occasional vacation trip to Italy, and returned with testimonials from some of the best schools on the continent. Thus by native talent and generous culture he fulfilled the first condition of teaching, became the master of his art and inspired enthusiasm in others, because he was full of enthusiasm himself.

But we have wandered beyond another important factor of Dr. Tourjée's life. A second fundamental element in a great teacher is his sympathy. He lives in and for and through others. He aims, not simply to master truth himself, but to adapt it to his students. He goes down to the platform of his pupils, and leads them step by step up to his higher plane. D. Tourjée's sympathy made him teacher and organizer of instruction for others. No one can meet him, even casually, without being impressed with the inborn grace and suavity of his manner. This grace is not simply French politeness, though the blood of the Huguenots is coursing in his veins, but springs spontaneously from a nature overflowing with sympathy. While his musical talent and culture would have made him *facile princeps* among American composers or performers, he has shown no ambition for mere personal achievement. In fact his visits to Europe have been quite as much in the interests of his pupils, to perfect a system of instruction, as for his own personal culture. His sympathy led him to imagine every boy and girl filled with the longings with which he himself had struggled, and, like a true elder brother, he set out to give them advantages he had never enjoyed. When only eighteen years old, in addition to the management of his store, and the editorship of the *Musical Journal* and his private study, he threw himself enthusiastically into teaching music in the public schools. Even at that time he gave hints in his paper of the radical change in the system of musical instruction in America, which he later inaugurated and which he has since so grandly carried out. He wonders why our system of education in classes, which has proved so successful in every other study, should not be applied to music; why the advanced instruction in music should be put beyond the reach of the great masses by the old method of personal lessons; and why the favored few, who are able to pay for private instruction, should be shut up to the solitude and disheartening atmosphere of private study, and denied the stimulus and help which come from contact with congenial minds. In 1859 he inaugurated the Conservatory system at East Greenwich, R.I., with only three pupils. But his foresight had enabled him to wisely anticipate popular feeling. His school was soon running over, and he moved to Providence for enlarged facilities. At last, encouraged by his success, fortified by his experience in the great conservatories of Europe and by the authority of such masters as Mendelssohn, David, Haupt, Joachim, and others, and striving for the very highest musical advantages in America for his pupils, he moved in 1867 to Boston, and organized the New England Conservatory of Music. Here, again, his sympathy enabled him to wisely interpret the popular feeling. His enterprise supplied a deep and lasting need. Music is yet considered in America one of the luxuries, and is thus among the first interests to suffer and the last to recover from a panic. But the New England Conservatory of Music not only survived the financial crisis from 1873 to 1878, which wrecked so many promising enterprises, but grew in public favor. This sympathy it is which has sometimes led Dr. Tourjée beyond his own field to inspire new life in city missions and lay deep plans for foreign missionary work. This sympathy for others has led Dr. Tourjée and his wife to sacrifice the quiet of one of the most delightful homes in New England to organize a great Christian household for the hundreds of young women who come to the Conservatory. If the true teacher is he who gives of the treasures of science and art to the largest number, then surely the 28,000 who have been instructed at the New England Conservatory, and the hundreds of thousands to whom these have carried their treasures, entitle Dr. Tourjee to a high rank among the educators of the age. He is America's great Commoner in music.

We have already hinted at the third quality of the teacher; viz., a vision of the possibilities that are before himself and his pupils, and a power to inspire them with his faith. Dr. Tourjee has had throughout his career an ideal of improved methods of musical culture, which he has been working steadily to realize. His early plans at the Greenwich Academy seemed visionary to others, but he soon made his department there an acknowledged success. When he first talked of the Providence Conservatory of Music, even his friends thought him over-sanguine, yet again his first ideal was more than realized. But his ideal had advanced, and as he unfolded his new plans for a great American music school in Boston in connection with Music Hall, he again seemed to be an enthusiast and a visionary. But the 28,000 pupils who went out from that school, and the talented faculty, and magnificent building for the present Conservatory, with the largest attendance of any music school in the world, are only the ripe unfolding of the Music Hall school. The ideal now before Dr. Tourjée,—the ideal of a Christian home, of a broad, generous culture and of the finest musical training,—is a work worthy his maturest powers. May his life be spared to realize these undeveloped possibilities of American musical culture. We have been especially struck with his plan for enlarged general culture for students of music. If carried out, this plan will revolutionize musical culture, and make the Conservatory one of the potent factors in shaping the civilization of the twentieth century. We cannot better close our sketch than by a presentation of this ideal in the language of the latest catalogue of the Conservatory:

> "It is generally conceded that the study of music tends to refine the manners and cultivate the taste. At the same time the impression prevails that the concentration of effort necessary to insure the success of students pursuing a musical course precludes all possibility of culture in other directions. This impression is not only false, but the director is convinced by years of study and experience that music opens up the way to a broad and liberal culture. Education is a whole simply because man is a unit, and one part of the man cannot be developed to the highest point without the cultivation of the other parts of the nature. We might as well talk of a man becoming a good blacksmith by the cultivation of his arms alone, without any care of his stomach or his lungs, as to speak of a man becoming a great musician by the mere cultivation of his fingers, without any attention to the emotions and the mind, in which music has its inspirations and its ideals. Those who have had the longest experience in music are painfully aware of the inharmoniousness of an uncultivated musician or of a mere technicist, without a general culture. Hundreds of musicians are failing to take the highest positions in our colleges and universities, because of their limitations in this respect. Upon the other hand, the world is painfully aware of the undesirability of men whose minds alone are trained, while their manners are uncouth, their bodies unhealthy, their tones unpleasant, and their emotional and moral faculties undeveloped. We aim to overcome the one-sidedness of men's intellectual training upon the one hand, and of most private instruction in music upon the other, by the Conservatory system combined with a generous culture. *Our idea of education is the harmonious development of all one's faculties to their highest power and their application to the highest use.*"

REPORT OF THE UNITED STATES COMMISSIONER OF EDUCATION, 1880.

The report of the United States Commissioner for 1880 has a two-fold claim upon our attention. It presents a complete record of the specified year and a brief survey of the decade. In the introduction the Commissioner observes that "the important relation which the office sustains to the interests of education becomes constantly more apparent." It is equally true that the bearing of education upon national progress is more clearly comprehended than at the beginning of the decade, a change in great measure due to the publications of the office.

The series of 26 tables, comprising about one-half of the appendix of the volume before us, are the result of what appeared at the outset the most difficult part of the proposed work. It was necessary to devise a scheme of statistics suited to the conditions of our country, to secure the voluntary coöperation of countless officials in filling up the blank forms, and this in the face of a general want of confidence in the applicability of figures to the subject-matter of education. It is chiefly owing to the persistence with which General Eaton has maintained this mode of representation that its importance has come to be so generally recognized among us, and that our school statistics compare so favorably with those of European nations.

"Knowledge is power." In proportion as this aphorism is accepted, and especially in proportion as it is interpreted to mean diffused knowledge, is the demand for a record of the means of education. Whatever may be the order of the record, for purposes of study it is finally resolved into Quantity, Quality, and Results.

Facts relating to the first topic have all along been most fully reported by the correspondents of the office. In the present report, school population and enrollment in public schools are given for all the States and nearly all the Territories. It is safe to assume that the 63 per cent. enrolled will master the rudiments of learning, but it would be unfair to infer the converse with reference to the remaining 37 per cent. The legal school period in the United States is from 10 to 17 years. In the States in which this period agrees most nearly with the average period in foreign countries, viz., 8 years, the enrollment is a very high percentage of school population. Thus, in Massachusetts, New Hampshire, and Rhode Island, in which the term is 10 years, the per centages are respectively 99, 90, and 87; in Texas, where the term is 6 years, enrollment is 89 per cent of school population. In South Carolina, where the school period is the same as in Massachusetts, enrollment falls to 58 per cent. of school population.

By reference to Table II., appendix to report, it will be seen that the majority of pupils enrolled in the city public schools are in the primary and grammar grades. If the figures could be extended into these details for the entire country, it would appear that the enrollment and average attendance between the ages of 6 and 12 approach much nearer the school population between those ages than is the case for the years between 12 and 16. Without classification the figures throw little light upon the quality of our schools. Since 1872 the office has been laboring to impress this fact upon its correspondents by the use of distinct forms of inquiry for elementary, secondary, and superior instruction. The idea is of slow acceptation, as will be seen by the table just referred to. Of 244 cities there included, only 110 attempt a classification of pupils; yet cities have special facilities for determining the requisite facts.

While, for the purpose of comparative study, fuller and better classified statistics are indispensable, one important conclusion may be affirmed upon the present showing, Comparing the census tables of illiteracy with the school statistics, it is evident that illiteracy bears an inverse ratio to the condition of public schools; where they are most numerous and flourishing, illiteracy is at the minimum, and until the reverse is true, no argument, criticism, or opposition will prevail against them.

The status and qualifications of teachers differ greatly in the several States The occupation is not highly remunerative; average salaries for men ranging from $25.24 a month in South Carolina, to $101.47 in Nevada; and for women, from $17.44 in Vermont to $77 in Nevada. In North Carolina, with school year of 54 days and an average salary of $21.75 a month, a teacher has the animating prospect of an annual stipend of $39.15; in Nevada a teacher of the male sex may cherish an average annual expectation of $483, while his sister laborer is rated at $366.50; Massachusetts offers to men the average annual inducement of $398.25, and to women of $180.54; Ohio, to the former $280, to the latter $195. The figures are not flattering to us. In France the minimum salary of primary teachers is $190, the maximum $418. The Prussian government proposess to raise the elementary school-teachers' salary to a minimum of $200. In England the average salary paid to masters in all classes of schools receiving the royal grant is, in round numbers, $600; average in School Board schools, $628. The averages for school-mistresses are, respectively, $360 and $425.

The extract from the report of Gov. George B. McClellan, quoted by the Commissioner, is interesting in this connection. It suggests as a fit subject for the consideration of the Legislature, a thorough examination of the school system, and the determination of essential details, among others the minimum salary of teachers; and this being done, the fixing of a rate of State school-tax each year sufficient to produce the required sum. Such action might raise every district above a ruinously low rate, and would offer no obstacle to local liberality.

In the cities teachers command fair salaries, as may be seen by reference to Table II., which presents the average annual salaries in various grades. The largest amounts are $6000 to principal of Normal School of New York City, and $3,780 to principal of the High and Normal Schools, Boston. The smallest amounts are $200 to male teachers in primary schools, and the same to female principals in grammar schools, Carbondale, Pa. Principals of grammar schools receive salaries as high as $2,700, $2,500, and 1,800, which last sum the city of Salem has the courage to pay without distinction of sex.

Continuity of service is a vain expectation where salaries are less than laborers' wages, but it seems as if our cities and wealthy townships might evolve some safe and respectable tenure. The Massachusetts legislature has endeavored to place the teacher's term of service upon a worthier basis than skill in flattering superior officers, or humoring the caprices of patrons, or polling voters for aspiring politicians, which are too often the qualifications canvassed in that ambiguous ceremony, an annual election.

Special training for teachers has arisen partly from the effort to advance the service to the dignity of a profession and partly from the necessity, in the employment of so large a force (viz., 282,644) of making the best of poor material. The same end is sought in other countries in various ways; in England, by the employment of pupil-teachers; in Prussia and other German States, by the establishment of different classes of normal schools. In the United States normal institutes and summer normals have been found excellent agencies for improving the teachers of rural schools ; graduates of normal schools, as a rule, being sought for more remunerative places. Normal departments are increasing in secondary schools and colleges, especially of the South and West, and a number of influential colleges and universities are seeking endowments for chairs of Pedagogy. Such chairs are sure to come with increasing wealth and knowledge, and, as the Commissioner observes, " will exercise a powerful influence in the educational affairs of a State."

The present status of normal schools is admirably set forth in the report. The total number of normals is 220; classified as public 106, private 114. Of the former 84 are supported by State appropriations, 1 by county appropriations, and 21 by city appropriations. The public normals, though numbering 8 less than the private, have 8,000 more pupils and 340 more instructors. It is also noticeable that a much larger proportion of the pupils of public normals are normal students,—*i. e.*, preparing to teach,—than of the private institutions. Public normals derive their support from annual appropriations, which are generally liberal. The largest appropriation to a single institution in 1880 was $95,000 to the Normal College, New York City. Four other institutions received more than $20,000 each, and appropriations of $25,000 and upward were made by eight States to this class of schools.

The objection is sometimes raised against these schools that their results do not warrant their expense, and as libraries, laboratories, etc., are multiplied unto them, jealous apprehensions arise in some quarters lest they should encroach upon the ordained province of the colleges. The former objection has been repeatedly exploded by investigations conducted with unsparing animus; the latter is an idle crotchet. The grade of scholarship that ought to be maintained by colleges if they are to count for anything in public progress, is not, and need not be, a *sine qua non* for normals. On the contrary, the ideas of mind, of matter, of methods of instruction, of moral and physical development which it is the province of normal schools to inculcate, are indispensable to that great body of young people from whom the teachers' ranks will be recruited, but who for obvious reasons would never be prepared for the college curriculum.

The Commissioner dwells upon the need of bringing science-knowledge and correct methods of science-study to the attention of normal students. Evidently he has in mind that knowledge of matter and material phenomena which is required in ordinary lives, but too often ignored in ordinary schools. Recent conferences in England, France, and Germrny show that it is not easy to point out a correct method for the acquisition of such knowledge. Something is accomplished when teachers are warned against a treatment that renders familiar things strange, past recognition.

In the Southern States the number of men engaged in teaching, and enrolled as normal students, exceeds the number of women; the reverse obtains in the Northern States, a condition that suggests the possibility of decided differences in the issues of elementary education in the two sections. The disproportion between the number of teachers required in the schools and the graduates of public normal schools is a reason for encouraging private normals, notwithstanding their inferiority to the public normals in funds and appointments. Most of these private normals are denominational schools, and their spirit is eminently moral and Christian,—elements of no mean value in the teacher's preparation.

The summaries of school income, expenditure, permanent funds, etc., afford interesting studies. Delaware, Colorado, Nevada, New Hampshire, Oregon, Rhode Island, and Vermont are the only Northern States in which the annual income falls below $1,000,000. Virginia is the only Southern State in which the income reaches that amount. The chief sources of income are State and local taxes and the interest on permanent funds The ratio of the amount raised by taxation to the whole income does not vary much in the several sections. In the New England, Middle Atlantic, and Northern Central States it is 80 per cent. and upward; in the Southern Atlantic States it is equally high, excepting in Florida, where it falls to 70 per cent. It is 80 per cent. in three of the Southern Central States, and in the remaining three ranges from 50 to 70 per cent. It reaches the lowest rate, and varies most, in the Gulf States and the States of the Pacific coast, falling to between 40 and 50 per cent. in Mississippi and Nevada. If the figures be accurate enough to form the basis of general conclusions, it would appear that the meagerness of income in the Southern States is owing to the lack of permanent school funds. This deficiency, and the illiteracy which accompanies it, give rise to the appeal for national aid.

The proposed measure of relief is in the line of the policy hitherto pursued by the government as shown by the record of national land grants in the report before us. The total number of acres thus appropriated up to June 30, 1880, was 78.659,434, of which upward of 80 per cent. was for common schools.

Kindergärten, which are chiefly under private auspices, have increased from 43 in 1873, to 232 in 1880, having 524 instructors and 8,871 pupils. It will be observed that the legal school period in twenty states includes children under six years of age; but we are behind England and France in public provision for schools specially adapted to children of such tender years. In France, in 1880, there were 606,014 children in the "Ecoles Maternelles." In England and Wales there were by the latest report 1,268,250 children under seven years of age upon the registers of aided schools.

Public provision for the industrial training of the masses is limited to sewing as conducted in the girls' grammer schools of Boston, and industrial and free-hand drawing as required by the school laws of Massachusetts, New York, Vermont, and a few cities. Considering the industrial importance of drawing, it is difficult to understand why the branch is so generally neglected.

Our efforts to combine workshops with schools have failed; but if France maintains the system, as seems probable, and England imitates her, we shall without doubt renew the experiment. Meanwhile institutions like the School of Mechanic Art in connection with the Massachusetts Institute of Technology, and the Manual Training School in connection with Washington University, St. Louis, are bringing certain theories of manual training to practical tests. The system of instruction and training pursued in most reform and charity schools might seem to give color to the assertion that the unfortunate and vicious have the chance of a better preparation for life than those more favored by fortune. In 1880 such institutions had about 70,000 inmates,—certainly not a large number as compared with the massess of youth in our cities who must early shift for themselves without knowing how to do anything, or with the colored youth in the South who are destitute even of the traditions of morality and industry.

Secondary instruction is not a definite expression in the United States. The number of pupils represented as receiving its benefits in all classes of institutions reporting under the head is 196,499, or a trifle above one per cent. of our school population. The basis of comparison, it should be observed, may properly be assumed in all but the four States in which the legal school age-ends at 14 or 15 years. A distinction has recently been allowed between education and culture; secondary schools are supposed to promote the latter, whatever their relation to the former, upon which conception alone an understanding of their nature and effects is desirable. That broader view expressed by the commissioner, namely, that "it is the province of secondary schools to form intellectual tastes, to excite vigorous mental action, and to awaken intelligent interest in all subjects of knowledge," increases our disposition to inquire what these schools are doing for "sweetness and light." Whether it be from a peculiar modesty, want of system, or a spirit of monastic secrecy, institutions of this class make fewer revelations bearing upon quality. In the case of secondary schools, Table VI. of the Report, a single suggestion is afforded. Out of a total of 110,277 pupils they had 9,397 preparing for classical or scientific courses in college. Preparatory schools, Table VII. it is stated, "have more uniform grade, and more definite aims and courses of study than the secondary." This would be inferred from their location and special function as training-schools for the colleges. They number 125, of which 92 are in the New England and Middle Atlantic States; it is hardly necessary to add that they are liberally endowed with respect to funds, appointments, and teaching-force. Phillips, Phillips-Exeter, Hopkins Grammar, Boston Latin, and a few other names in the list are as truly guarantees of excellence as Eton, Harrow, or Rugby. The data bearing upon secondary education point unmistakably to the need of larger endowments and better organization for its conduct. The Commissioner points out one important measure for its improvement: "Guarantees of excellence," he observes, "may with propriety be required from all chartered institutions. If this were done, and the incorporated schools in each State held to definite standards, those of merely private character would as a consequence cease to exist or would conform to the same requirements."

Provision for training in science and art is not a more marked feature of our progress than the increase of facilities for classical and philosophical study. So much attention has been drawn to the action of Government in endowing schools of science and technology that we are in danger of overlooking what private liberality has done for the classical colleges. The proceeds of the land grant for 1862 amount thus far to $7,553,405, a sum exceeded by private benefactions to six of our universities or colleges during the decade. In 1880 benefactions to universities and colleges amounted to $2,666,571, to schools of science $1,371,445.

Our limits do not permit the notice of the remaining topics of the report. Movements for the better education of women, for the increase of libraries, for the education of the unfortunate classes, the attention paid to school architecture and to the conditions affecting the health of scholars, leave us with the impression that—if we are "the most common-schooled and the least cultivated people in the world," our schooling is rapidly working for culture. Even the history of diploma-selling is not wholly to the discredit of American intelligence, as will be seen from the interesting account of the Buchanan exposé embodied in the report.

Our examination of the report has been confined to the statistical tables and the Commissioner's summary; the "abstracts" of the appendix contain more detailed information touching every phase of progress, and it might almost be said every institution and agency for the diffusion of knowledge.

Examination-passes and percentages, the accepted criteria of educational systems, do not figure extensively in our reports; we make, however, some impressive exhibits of a higher order of results. "The best political economy," said Emerson, "is the care and culture of men." With a voluntary school-tax of $70,371,435 in a single year; with private benefactions amounting from 1872 to 1880 inclusive, to $54, 000,000; may we not conclude that our schools are gradually raising our whole people to the level of this grand idea?

FOREIGN NOTES.

GREAT BRITAIN.—*Elementary Schools.*—The latest report of the Committee of Council on Education, for the year ending September 30, 1881, has been received at the Bureau of Education. From this report it appears that, in the specified year, the inspectors visited 18,062 day schools in England and Wales, to which annual grants were made, containing 26,376 departments under separate teachers, and furnishing accommodations for 4,389,633 scholars, or rather more than one-sixth of the population. On the registers were enrolled 4,045,362 children, of which number 2,573,800 were between the ages of 7 and 13 years, the period to which the compulsory school attendance acts apply; 1,268,250 were under 7 years, and 203,311 were above 13. The average daily attendance throughout the year was 2,863,535. The number qualified for examination by reason of having made the requisite number of attendances was 2,775,150.

The government grants amounted to £2,247,507, or 15s. 8¼d. per scholar in average attendance. Some interesting facts are brought out by the comparison of the work of the present with that of the past years, as also the status of Board with that of Voluntary Schools. School Boards are making rapid advance throughout the country, the number of their schools having risen from 826 in 1874, to 3,692 in 1881. The number of Voluntary Schools in 1874 was 11,341, with accommodations for 2,626,318; while in 1881 the numbers were respectively 14,370 and 3,195,365. Voluntary subscriptions fell off during the year to the amount of £10,000. The treasury of the Voluntary Schools was, however, helped by enlarged grants and the increase of school fees. The cost per scholar in average attendance last year was £2 1s. 6d. in the case of Board Schools, and £1 14s. 11½d. for Voluntary Schools; the average amount of rates had fallen from £1 2s. 2½d. in 1876, to 16s. 11¼d. in 1881. The activity of School Boards may be judged by the extent to which they have availed themselves of the power of borrowing on the security of the rates, given by the Acts of 1870 and 1873. For the erection of new buildings, 1,637 School Boards have taken loans to the amount of £13,784,694 (about $65,000,000), or an average of £12 5s. 1d. for the accommodation of each child. The rule with the Boards is to build substantial houses, due regard being paid to light, ventilation, sanitation, etc. In 1874 there were 18,714 certificated teachers; 2,489 assistants, and 27,031 pupil-teachers. In 1881 the numbers had risen to 33,562 certificated teachers, 8,559 assistants, and 33,639 pupil-teachers.

Salaries still average better than in other countries, but have slightly diminished within a year. The average salary of a certificated master fell from £121 2s. 7d. in 1880 to £120 16s. 1d. in 1881; in the case of mistresses the decrease is from £72 12s. 8d. to £72 10s. 4d.

Training Colleges.—There are 41 Training Colleges in England and Wales, of which 17 are for masters only, 23 for mistresses, and one for both sexes. These were attended in 1881 by 3,116 students. The total expenditure was, in colleges for masters, £80,113 3s. 1d., or £59 8s. 7d. per student; in colleges for mistresses, £71,191 9s. 3d., or about £41 15s. 7d. per student; and in the college for both sexes, £2,828 18s. 0d., or £53 7s. 6d. per student. We shall never be able to estimate the cost of preparing teachers in the United States till our Normal schools report thus in detail.

Elementary Schools.—In Scotland the inspectors visited 3,074 day schools in receipt of annual grants, containing 3,395 departments under separate teachers, and furnishing accommodation, at 8 square feet of superficial area per scholar, for 612,483 children, or about one-sixth of the population. On the registers of these schools there were enrolled 544,982 children, of which number 390,531 were between 7 and 13 years; 112,680 were under 7, and 41,771 above 14. The average daily attendance throughout the year was 409,966; the number qualified for examination by reason of attendances, 400,409. The average salaries in schools of all classes receiving grants were, for certificated masters, £137 5s. 7d., and £69 4s. 3d. In public schools the averages were respectively £136 15s. 1d. and £67 17s. 1d. Of the training colleges under inspection, 4 are for both masters and mistresses, and 3 are for mistresses only. The attendance in these schools in 1881 was 857, and the total expenditure for their support was £33,938 0s. 10d.

Scotland vs. England and Wales.—The report of the Inspectors' examinations shows a somewhat higher degree of attainment in the schools of Scotland than in those of England and Wales. The number of pupils presented for individual examination in the former was 311,228; in the latter, 1,995,698. In Scotland 91.93 per cent. passed in reading, 88.85 per cent. in writing, 84.19 per cent. in arithmetic. In England the per cent. of passes was: in reading, 88.99; in writing, 80.78; in arithmetic, 75.69.

Circular to Inspectors.—The new Education Code which goes into operation next Spring invests inspectors with a discretion not allowed under the present code, touching eleven important points. The opposition which this excited is likely to be somewhat allayed by the circular recently issued from the Education Department, for the guidance of inspectors. In this document explicit directions are given for maintaining uniformity in examination standards; provision is made for appeals to the senior inspectors in cases of real or apparent hardship; the method of procedure in the examination of infant schools is carefully outlined; and, even in the vexed matter of the merit-grant, the directions, if followed, would insure justice in deciding between fair, good, and excellent schools. The general directions to the inspectors are conceived in the happiest spirit. They are enjoined to be punctual in meeting their appointments for examination, and to avoid haste, impatience, or other action that might worry timid, nervous children and teachers. Inspectors, however, "are but men," and no paper rules can eliminate their personality from their work. Perhaps the most promising clause in the circular is the assurance that inspectors hereafter appointed shall be specially trained for the service. It is noticeable that while the London Times seems to find in the circular a corrective for all faults of inspection, the education journals regard it as only a tentative good.

FRANCE.—*The New Law.—Infant Schools.—Primary Schools.—Secondary Schools for Girls.*—The new Education Law of France went into operation October 2. Preparations have been pushed with energy since the passage of the Act in March, and enough has been accomplished to insure an impressive beginning. Until his resignation, Jules Ferry did not cease his efforts to create school funds equal to the requirements, to drill teachers in their new duties, and to inspire them with something of his own zeal, and to arrange plans in detail for special features of the system. Since the 7th of August the work has passed into the charge of his successor, J. Duvaux. Infant schools (*Ecoles Maternelles Publiques*) are no new feature in the French System, but in anticipation of the approaching session, they were the subject of an elaborate circular issued by Jules Ferry. The object of the "Ecoles Maternelles," as set forth in the circular, is to give to children below the school age the care necessary for their physical, intellectual and moral development, and to prepare them to receive with profit the primary instruction. Study is not required; instruction and exercise are treated in the circular under the heads which give one the impression that the French "infant" must be a marvel of receptivity. Lessons on familiar objects and the first notions of natural history are arranged for each month, much after the manner of the schemes prepared for primary teachers in Boston.

With reference to the order to be followed in these lessons, the circular says: The endeavor should be to combine as much as possible and with reference to the same object, the lessons on objects, design, the moral lesson, the plays, and the chants, in order to produce by this union a more lasting impression upon the mind and heart of the child.

The organization and plan of studies for the public primary schools are arranged in detail. The course is in three parts; elementary (7 to 9 years), middle (9 to 11 years), and superior (11 to 13 years), which division is obligatory in all the schools, whatever may be the number of classes and of scholars. In any commune where there is no "Ecole Maternelle," a class for children under school age may be formed in the primary schools. If more than 10 scholars who have received the certificate of primary studies desire to continue their studies, a complimentary course of one year may be added. Teachers will recognize the practical wisdom of many of the regulations for primaries: thus, it is ordered that the exercises which make the greatest demand upon the attention shall be assigned for the morning hours. The training in gymnastics and military exercises is regulated by manuals distributed among the schools. The directions with reference to manual work are particularly interesting to us just now. In the course laid down for boys, tools are not introduced till the close of the middle course, when notions of the most useful tools are to be imparted. The superior course provides for exercises with the principal tools used in working wood and iron. The manual exercises for girls are chiefly knitting, sewing and cutting. In the superior course, notions of domestic economy are included with practical exercises in cooking, and in the management of the house, garden, etc.

The last step in preparation for the opening of the schools was the circular addressed September 7, by Minister Duvaux, to the prefects, calling their attention to the declaration required from parents and guardians of their intentions with respect to the education of their children. Immediately following the issue of the circular, the *Official Journal* published a model of a letter to be sent to parents. A correspondent of *The London Times*, in a letter dated September 22, declares that the authorities have been remiss and discordant in this preliminary measure.

The Act prescribes that the parental declaration shall be made at least a fortnight before the commencement of the term, but in most cases the summons was not issued early enough for this purpose, and a later date has been fixed. The clericals contend that this is illegal, and that consequently the declaration has lapsed for this year. Mayors were at first directed to refuse collective declarations; subsequently a circular was issued, whereby the registers of State and Sectarian schools exempted parents from declaration, leaving the formality binding upon those only who prefer home tuition. This circular does not apply to Paris, and the Paris Mayors are requiring individual declarations. The Catholics do not seem to be agreed upon any mode of meeting the Act, but their opposition to secular education is manifest. The questions now pending are: whether France will be covered with opposition Catholic Schools, or whether the State Schools will meet the scruples of the Catholics by remaining neutral instead of rushing to an extreme irreligion.

In his speech of July 2d, before the Philotechnic Association, Jules Ferry depicted in glowing terms the effect of the liberal education of women upon the destinies of France. He labored in every way to promote this cherished ideal. The following programme for secondary schools for girls was issued just before his retirement. The course occupies a year, the students being 15 or 16 years of age.

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VOL. III.—JANUARY–FEBRUARY, 1883.—NO. III.

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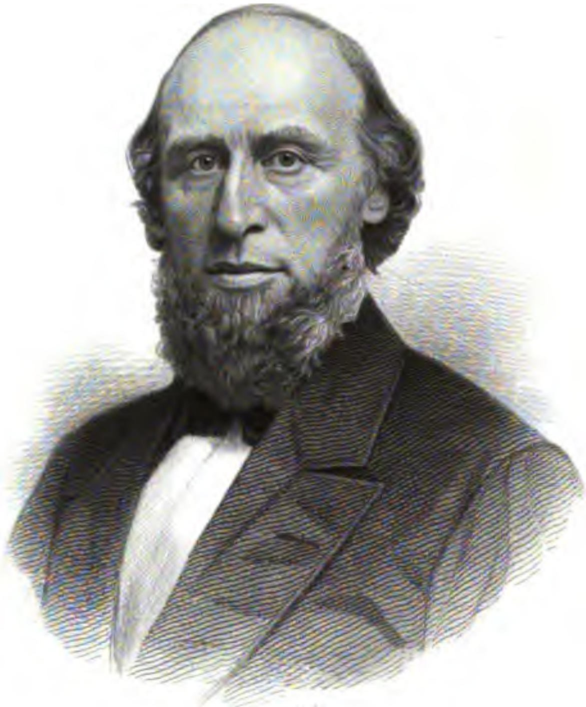


A. A. Miner

EDUCATION.

No. III.—January, 1883.

PREMIUM ESSAY.

THE TRUE ORDER OF STUDIES IN PRIMARY INSTRUCTION, AND THE PROPER TIME FOR EACH.

BY ZALMON RICHARDS, A. M., WASHINGTON, D. C.

[Continued from last No.]

COLLATERAL EXERCISES.

The foregoing exercises are to be alternated daily with other important branches of instruction. Only about one-fourth of the actual training-time in a daily school of three and one-half hours will be required in specific language training. But it must be borne in mind that during these three-and-a-half hours the whole attention and the thoughts of the pupils are to be constantly and intently occupied in some kind of intellectual work. But there are from two-and-a-half to four hours more each day, according to the length of the prescribed school-day, in which the same pupils may be employed as follows:

1. They should be required to copy or write the various new words on slates, or on paper, or in their little blank-books (before referred to), with pencils at first, and finally with pen and ink, under the special supervision of the teacher.

2. They should be exercised in reading simple numbers upon the blackboard as far as to thousands or further, and then in writing the same upon their slates. They should be taught to count readily to hundreds or more, by using the numeral frame, blocks or beans, or any other approved devices. By the use of the frame, also, they may be taught to add, subtract, multiply, and divide.

These exercises in numbers should be so conducted as to accustom the pupils to think arithmetically. To do this, numbers of a simple character should be introduced into stories, conversation, and reading-lessons, so that the children may be prepared for future and more advanced arithmetical training.

3. There should be frequent and alternating lessons upon the human body, upon animals, plants and flowers, divisions of time, drawing, and is some of the eye and hand-work of the kindergarten, adapted to this stage of development.

4. There should be regular exercises in singing, physical training, instructive plays, etc., according to the time allotted and to the wishes and ingenuity of the teacher. But they should always alternate with the intellectual exercises, so as never to weary or tire or disgust the pupils.

Recesses.—There should be five-minute recesses about once in an hour for small children, to meet nature's demands; but there should be a careful eye and strict regard for the physical habits of the children. Regularity and order in this respect are all-important. There should always be one recess for eating and drinking, when all the children should take their lunch in an orderly manner and under the eye of the teacher if possible, when they should be taught to eat slowly, masticate thoroughly, and observe habits of neatness and quietness. These directions apply only to such as do not go home to lunch.

During the next twenty weeks, or during the last half of the year, a similar routine of exercises should be followed, upon progressive principles.

1. The language-training will require the use of some well-adapted primer or First Reader, or some well-devised chart-readers.

2 In addition to the above-named collateral branches of training, which should vary and advance as the children's minds develop, the geographical table may be introduced, by which the natural features of the earth may be represented in miniature, so as to make the children familiar with the different bodies of water and of land, and with their names, orally and visibly. They should be able to call the names at sight, and learn to make and write them correctly.

In this way, as in all the. other language lessons, they will learn to spell perfectly and practically; as they must be required, in meeting with new words, to learn the meanings *objectively*, to give the elementary sounds in them, and name all the letters, and say which are sounded and which are silent. By this course the usual humdrum of spelling will be avoided, and children will learn to spell the common words more accurately.

The above one year's course is worth very much more than the usual two years' course by any other method.

SECOND YEAR.

The pupils having gone through the previous two years' training, in accordance with the directions given, are now prepared to make rapid and most satisfactory progress. During this year the children are to be trained in the language of the various necessary elementary branches of future school training, as preparatory to the work of studying. Each exercise should not, as a general thing, be over twenty minutes. Of course the length of time can be varied to suit circumstances, but there should be nothing going on in the room at the same time calculated to distract the attention of any member of the class.

1. There should be daily exercises during the whole year in arithmetical reading-lessons, in which simple ideas of numbers should be introduced, in connection with some interesting story or description within the comprehension of the children. These lessons must be very simple at first, but may become gradually more complex and difficult, until the pupils become capable of studying out arithmetical questions by themselves. As the pupils progress, every variety of arithmetical training, according to their development, should be introduced; and, if the right kind of reading-book is used, the children will have no necessity for any other book in school. If there is no such reading-book prepared, there should be as soon as possible; or something should be selected as a substitute.

2. To alternate with the arithmetical reading-lessons, there should be specially prepared geographical and historical reading lessons, in story form, designed to advance the pupils in the necessary knowledge of geographical terms, and of common historical facts. The geographical table may be further used with globes and maps.

Historical stories, containing references to localities, cities, towns, rivers, lakes, etc., should be selected or prepared, to be read as an aid in acquiring a practical knowledge of the common and most important elementary facts of geography and history. This training is preparatory, of course, as a linguistic training to precede the higher grades of geographical and historical study.

3. Physiological reading-lessons should also be used, so that the terms and elements of physiology may become familiar to the children, and that they may know the common parts of their own bodies, and be prepared to study the higher and more complete works on this subject. Into these lessons may be introduced a description of the bones or frame-work of the body, and the common names, illustrated by drawings or a skeleton; also a description of the food and its mastication by the teeth, the use of the tongue, the saliva, the glands,

the gullet, the stomach and its fluids or juices, digestion, circulation of the blood, the duodenum, liver and gall, the pancreas, lacteals, thoracic duct, veins, arteries, lungs and heart. The names and uses of these, and of many other parts of the human body, can be introduced into interesting and profitable reading-lessons, suited to the intelligence, comprehension and needs of the children.

4. Botanical reading-lessons should also be used to make the children acquainted with the common terms and principles of botany, and teach the characteristics and nature of common plants and vegetables. For aids and illustrations, Prang's cards or similar pictures may be used with great benefit and interest.

5. Zoölogical reading-lessons may be used, in which the language of animal history may be learned, and many of the characteristics and habits of the more common or even rare animals may be learned. Here, again, natural-history cards may be profitably used. There are many useful books which treat of animals.

6. Reading-lessons may, and should be, also prepared which will make children acquainted with many of the elements and with the common terms of the natural or physical sciences, so as to prepare them for the more extended study of the same. But it must be always borne in mind that the chief design of these reading-lessons is to secure good linguistic training, while at the same time the art of reading is most effectually acquired and much useful knowledge gained.

7. There should also be regular lessons in reading music, when the principle as well as the practice of vocal music (at least) should be taught. The musical characters used to represent certain musical sounds in the diatonic scale, just as letters represent certain elementary sounds, should also be learned. The teachers ought, therefore, to be able to read the musical sounds themselves from their representative characters upon the staff, and to teach the children to do the same.

Penmanship and Drawing.—Penmanship and the elements of industrial drawing should be regularly taught and practiced, occupying a proportionate part of each school-day, in addition to the continuous practice of writing words and sentences on paper, slates, and blackboards.

Physical Training.—Until suitable arrangements are made for the industrial training of all children in public schools, collateral with their intellectual training,—as there should be, and as there will be at no distant day,—there should be devised and used some simple and appropriate physical exercises, to secure a proper and healthful physical development of the body. The teacher can select from the various systems of light gymnastics all that is desirable. But to make the exercises of any practical advantage, they must be regular, and conducted upon approved physiological principles. They should never be performed with listlessness, but every movement should have a specific design. In all cases they should be performed in well-ventilated rooms.

Recesses, etc.—It is well to have at least a recess of five minutes every hour, for necessary purposes; and one of them should be for lunch, as long as may be necessary, as directed for the last year.

THIRD YEAR.

Each exercise should be from twenty to twenty-five minutes of undisturbed occupation. During the third year language training should be continued by using reading-lessons similar in character to those of the second year, but of an advanced character, suited to the development of the pupils. Until the right kind of reading-books is prepared, teachers and the school authorities must provide the most appropriate kind of reading-matter. Young people's magazines, leaflets, and the best Third or Fourth Readers can be profitably used, but every reading-lesson should have some specific purpose within the comprehension of the pupils, designed to impart some useful knowledge.

The practice of making out all new words, objectively, phonetically, literally, and orally, should be constantly kept up. Great and constant care should be taken that all oral reading and all speaking should be performed in the most approved and natural manner, as to tones, inflections, quantity and quality of voice, so that there may be no necessity for elocutionary training in after-years. Every word in every exercise should be made so familiar in form and meaning that the pupils can define, use, and write them correctly, and pronounce them at sight whenever required.

There should be a daily practice of requiring every pupil to write out and give oral accounts of what they read, or hear, or see, as accurately as possible. These exercises, properly conducted, will furnish all the specific language-training necessary for this year.

Geography.—There should be daily exercises in geography, to familiarize the pupils with the location and names of places, and with the natural and civil divisions of the earth, as a whole at first, and then as far as possible with the subdivisions of the earth.

1. Impress upon their minds the names and relative location of the cities, large towns, rivers, mountains, lakes, etc., by the use of maps and globes. Here, also, the moulding-tables, with which every primary school should be supplied, may be used successfully.

2. The large, civil divisions of our own country,—the States, Territories, and capitals,—the prominent physical features, should be carefully represented by maps drawn upon large sheets or blackboards, in the presence and with the undivided attention of every pupil. The teacher, by previous study and preparation, should make outlines of just that portion of the earth or country to be described, as a specific lesson to aid in accurate delineation. While drawing it, clear and accurate descriptions of the leading features and characteristics should be given. Each new lesson may include one or more States; and there should be a careful review, daily, of what has been previously taught. This should be kept up until the whole country is pictured before the pupils. The same work may be done with other countries and portions of the earth. A good hand-globe, showing the principal natural and large civil divisions of the earth, will be of great service in impressing correct ideas of relative size and location. Large, specially-prepared outline maps may be used. By the use of the globe, also, longitude, latitude, the motions of the earth, the zones, days, months, years, and seasons may be taught. All lessons should be frequently reviewed, to make impressions permanent, and the pupils should be encouraged to read and examine good books on geography to gain new facts.

Arithmetic. — Arithmetical reading-lessons should be continued during the year as far as possible. As a substitute for such books as ought to be in use, the pupils may be required to read simple problems, which are contained in various arithmetical works, and then give oral solutions, or written, if desirable. But it would be far better to have instructive and interesting reading-lessons which should contain simple arithmetical principles, which will require thought and calculation, to make the pupils acquainted with the tables of all denominate, simple, decimal, fractional, and mixed numbers.

Practical lessons should be regularly given, also, in reading adding, subtracting, multiplying, and dividing all kinds of numbers upon the blackboard, and then, to secure accuracy and rapidity, recited orally, sometimes individually, and sometimes in concert. The teachers should be prepared daily to dictate appropriate arithmetical examples for each pupil to read or solve. One or more pupils may work at the blackboard, and the rest upon their slates. The spirit of competition may be encouraged to some extent in accuracy and rapidity, and a record of results may be kept by the teacher.

Again, specially-prepared, or selected examples, as tests of ability and accuracy, should be daily dictated by the teacher for the pupils to write down in their blank-books and work out alone, during leisure hours in school or at home.

When the tables are learned thoroughly, and the simple principles and operations of adding, subtracting, multiplying, and dividing all kinds of numbers, including decimal and common fractions, are practically learned, then the children may use books which contain a suitable amount of examples for practice, under the different heads just named, for the purpose of perfecting themselves in the work of solving arithmetical examples, and not for memorizing rules.

Penmanship and Drawing.—As the children have been constantly using the pencil and pen for the two previous years, and have learned to form all letters and combine them into words with considerable ease and accuracy, any series of writing-books may be used for perfecting the children's penmanship.

The chief objects to be sought in teaching penmanship are, first, to habituate pupils to correctly form all letters of such size and slant as are adapted to the hand and arm muscles, so that the letters may be recognized readily at sight; second, to secure a natural, neat, and easy combination of letters into syllables and words, with a free hand and arm movement, to gain ease, neatness, and rapidity; third, to secure the proper training of the muscles of the hand and arm in holding and using the pen and pencil. Observe this rule: Habituate every pupil to a correct formation of all letters and characters, words and figures. Let nothing be done in a careless or unfinished manner. The same principles are to be recognized in the regular free-hand and industrial drawing exercises.

Physiology.—During this third year of training, more minute and particular descriptions of the human body should be given orally by the teacher, by appropriate reading-lessons, by familiar illustrations, drawings, charts, and models. In all cases, when it is possible, some specific and appropriate lesson should be given in hygiene. All common physiological terms should be made familiar by illustration, and the teacher must be prepared, by personal study and training, to give appropriate lessons and illustrations regularly.

Physical, Industrial, and Experiment Training.—Light gymnastics should be practised regularly, as required during the last year; but no course of elementary training is what it should be unless it embraces a well-designed and well conducted department of industrial training. (See remarks at close of fourth year.)

Music.—As during the previous year, all the exercises of every grade during this year should be interspersed with singing at regular intervals, in which every pupil should participate; and every musical exercise should be performed with as much attention and accuracy as any other school exercise. Music appropriately conducted will exert a disciplinary and moral influence over children; therefore whenever the school is weary, turbulent, or insubordinate, the teacher may drop all other exercises and engage in some appropriate songs. As soon and as fast as children are capable of understanding the principles of music, they should be taught to read it at sight.

Recesses, etc.—The same direction for recesses during this year should be observed as during the last year.

FOURTH YEAR.

By the time the children have thoroughly mastered all the elements of training and branches of study involved in the preceding three years' course, they ought to be able to gain knowledge from the reading and study of books, relying mainly upon their own ability, without much aid or simplification from the teachers, except by way of suggestion. The chief work of the teacher in conducting the studies of the children will be about as follows:

1. He must see that everything about the school-room is in readiness for school-work; that all prescribed and necessary exercises are carried out; that the conduct of all pupils is correct, and that order and quietness are maintained, so far as they may be consistent with a live, working school.

2. He must see that the proper amount of work is laid out and prescribed for each pupil for each school-day, and that the work assigned for the previous day has been properly done.

3. To give a brief and definite outline beforehand of the subject of each lesson, and of what the pupils will be expected to accomplish.

4. To examine each pupil in the class and ascertain whether he has gained a correct knowledge of the subject of the lesson previously assigned, and require oral or written demonstrations and proofs in what is usually called a recitation.

5. To keep such a record of attendance, conduct and character of recitation as will serve to be an incentive for the pupil to make higher and more vigorous efforts.

Subjects of Study for the Fourth Year.—The time for each exercise should be from twenty to twenty-five minutes of uninterrupted occupation.

1. During this year language-training is to form a part of every day's work, and, indeed, a part of every exercise.

(*a*) Daily exercises will be kept up in oral reading. The pupils must be made to understand that real reading implies a clear appreciation of the true meaning of the language read, and such an utterance of the language as will convey its true meaning to the hearer.

The very best kind of school-readers, leaflets, and magazines should be used.

(*b*) There should be daily exercises, when all the pupils should be required to translate either their reading-lesson, or some special language selection, in good English, both orally and in writing.

(*c*) In every daily exercise there should be an invariable rule, to require every new word to be correctly defined and spelled by every pupil.

(*d*) All the pupils should be taught to classify any word in their reading-lessons etymologically, and so understand its meaning as to use it correctly in a sentence of their own construction. The knowledge of classification must be imparted in oral lessons by the teacher, The name of the class of each word should be given, so that the pupils may be able to recognize at once the so-called parts of speech.

Second: Arithmetic.—(*a*) As during the last, so during this year, practical lessons should be given daily to secure accuracy and rapidity of work in all the fundamental rules of arithmetic, because in the practical business of life there will be a hundred operations in the four ground rules to one in any other part of arithmetic.

(*b*) The teacher should make special preparation for dictating original and practical examples in all the parts of arithmetic which have been passed over by the class, and the pupils must be required to give accurate solutions as expeditiously as possible.

(*c*) These examples may be used as comparative and competitive tests for determining the relative ability and standing of each pupil, so that the teacher may learn their deficiencies and weak points, and apply the proper aid to those who are deficient.

(*d*) Again, as the children should now have in their possession some complete text-book in arithmetic (it matters but little which of the many of the late authors is preferred, provided the book is well supplied with practical examples under each rule, and that each pupil has the same kind of book), a certain number of examples, involving the principles which have been already taught and illustrated, should be given out daily for mental and practical study when the pupil is not engaged in class work, or for study at home.

(*e*) The memorizing of rules or of operations is of little practical value, provided the principles of them are so thoroughly taught and illustrated by the teacher that the pupil knows how to do the necessary work.

(*f*) Three things should be borne in mind always in solving arithmetical as well as other questions: first, What is to be done? second, How is it to be done? third, Do it. Children learn best by *doing;* not by *memorizing.*

Arithmetical principles to be mastered. — During the four years' course the pupils should learn to read accurately and understandingly numbers in any form, combination, or relation; to add, subtract, multiply, and divide all kinds of simple, whole, decimal, and fractional numbers, and all kinds of denominate numbers; to memorize all the tables, and solve readily mental and practical examples under every head. As no arithmetical example or problem can be solved properly without using the mental powers, the first work of the pupil should be to give a mental and oral solution of problems before writing it out. If this work is always required, there will be no absolute necessity for memorizing the solutions usually required in the use of mental arithmetics. Mental arithmetics, however, may be profitably used for drill and test exercises. When all the work heretofore required has been done as it ought to be, the children will have acquired sufficient ability and knowledge to enable them to master the succeeding parts of arithmetic with very little assistance from the teacher, as soon as their minds have been sufficiently developed by age and experience.

Third: Geography and History.—If the geographical instruction required during the three previous years has been faithfully and thoroughly given, the children are now prepared to use the most complete text-books on geography and history. The teachermust now give out topics, and not pages nor sections, and must require the pupils to find out what their books and maps teach. Whatever portion of the world is embraced in the lesson, the essential elements of its history, as well as its geography, should be acquired at the same time. At all times, when localities or peculiar characteristics of a country are referred to in history, reading, or in school instructions, they should be pointed out by the use of maps or globes.

As much time is often unprofitably spent in map-drawing, it is important for the teacher to understand, first, that this exercise should serve to develop and improve the ability of the children in free-hand drawing and accurate sketching. For all practical purposes, in learning geography strict accuracy is not necessary as to points, lines, and boundaries,—though these should never be given carelessly and roughly; second, the chief advantage in map-drawing consists in making the children familiar with the topography of countries, and of the natural and civil divisions of the earth. To secure these important results, map-drawing should be made one of the exercises in industrial free-hand drawing.

Physiology and Hygiene.—In addition to regular oral instruction and lectures upon physiology and hygiene by the teacher, some good work on these subjects should be studied carefully by all pupils. After special topics have been assigned and studied, the pupils should recite them at regular intervals, that the teacher may test the accuracy of their knowledge on the subject. The teacher should be so thoroughly prepared upon each topic, as to conduct the examinations without using the text-book. To secure the most satisfactory success in teaching this subject, the teacher should have the use of the best physiological charts and models of the human body. They should be used only before the class, for illustration and for object-teaching. When not in use, like all other apparatus, the charts and models should be kept in cases or drawers secure from dust or injury.

Botany and Natural History.—There should be oral and illustrated lessons given at fixed times in the elements of botany, zoölogy, and chemistry by the teacher, with the use of books when necessary, for the purpose of familiarizing the pupils with the simple principles and language of these subjects. Children should be encouraged to bring in specimens for examination and reference.

Penmanship and Drawing.—There should be regular exercises in penmanship by using some good system of writing-books, in addition to the frequent and careful copying of their own compositions, under the eye and special direction of the teacher. Drawing should alternate with writing, by using some approved system.

Music.—There should be regular daily exercises in singing and reading music, when special care should be taken to cultivate the purest tones and the modulation of the voice, so as to express distinctly and pleasingly the sentiment of the language. The pupils should be trained to read and write music.

Physical and Industrial Training.—If it is possible, there should be an industrial-room easily accessible, where the physical powers and energies of each child should be trained and exercised with reference to the future employments of life. But if no such provision is made, then the teacher must select the most appropriate physical exercises in light gymnastics, which should be conducted in well-ventilated rooms and in strict accordance with physiological principles. For further views on this subject, see appendix.

Recesses and ad libitum Exercises.—Recesses may be regulated by circumstances, but if the minds of the children are intently occupied during the schoo hours, there should be a recess of five minutes every hour and one of twenty or thirty minutes for lunch. The number of recesses will depend upon the length of the prescribed school day. All the children who remain about the school-building or room should be under the supervision of some teacher, to regulate their actions and sports.

APPENDIX.

Industrial Training.—Children should become familiar with the language, at least, of all the common industries and employments of life; and they should have enough knowledge of their practical principles to secure the proper training of the eye, the ear, the hand, the muscles, and common tastes, so that they may have correct ideas of the arts, trades, and employments. The objects to be sought by such training are two-fold:

1. To properly employ and train the surplus physical energies of the children, which are usually wasted in useless or injurious sports and plays or in sheer idleness. These energies should be utilized while they are growing and developing.

2. Such training will greatly help in preparing the children for selecting some employment for their future lives, as their natural tastes, inclinations, and aptitudes will be normally developed thereby.

Children should be so trained, in their early education, that they may constantly feel that all their intellectual attainments are valuable only as they use them in the legitimate employments and duties of life. Right here we find some of the gravest defects in all our systems or methods of training. Thousands of our youth come from their schools of every grade with aimless purposes, and many of them spend aimless lives, or else, perhaps, they think their intellectual training entitles them to a living any way, without hard work. The industrial training needed, and herein advocated, is not a special training for a trade nor the learning of a trade, but such as will fit all children for any trade or occupation, and show their capacities and aptitudes for any desirable employment, so that they will not be liable to make a mistake in choosing an employment for life, as thousands do. Up to the present time no specific successful plan has been devised and adopted for connecting an industrial department, with the necessary intellectual training of youth, in elementary schools.

To meet the present urgent demands for a proper physical and industrial training of children in our elementary schools, the following suggestions are made:

1. There should always be provided industrial training-rooms, near or easily accessible to the intellectual training-rooms, provided with appropriate apparatus and tools, and with materials for experimenting and working in wood, paper, iron, clay, cloths, etc., with variety enough to employ a whole class at one time.

2. There should be a teacher, or teachers, thoroughly and specifically qualified and trained, to give instructions and directions in everything necessary.

3. The terms and language of all the employments of this room should be made familiar, as in the intellectual room, both to the ear and the eye of every pupil, to give them an industrial vocabulary.

4. The exercises of this room should form a part of every school curriculum, and they should be judiciously alternated with the intellectual exercises. The advantages of such a course of training must be patent to every well-informed person. Every child and young person should have a certain amount of industrial training before he is fit to enter upon any specific profession or employment. The Polytechnic, and all professional schools of high grades, require just such a preparatory training as above indicated, before pupils can profitably take up their prescribed course of study; and, lastly, such a training is specially needed to fit all children for the common duties of life.

COUNTRY SCHOOLS.

BY HON. JAMES P. SLADE, ILL.

When it is remembered that all the education received at school by by the great majority of the youth of the country is obtained in the public schools, and that more than three-fifths of this number are enrolled in the country schools (in Illinois the number is 437,220, against 266,821 in graded schools), no apology is needed for devoting this paper to a discussion or consideration of this class of schools. In speaking of country schools I shall naturally speak of such country schools as are found in Illinois (I presume their characteristics are much the same all over the country), and so, at the risk of stating what some know very well, I will in a few words tell what our school system is as established by law, so far as it relates to the country schools, in order that we may understand the frame-work, so to speak, in which the schools are set.

In Illinois we have what is known as the district system, the limits of the district being fixed by the board of township trustees of schools elected in every school township, which is the same as a congressional township, and these limits can be changed only by the trustees upon petition from people or districts interested. These districts vary much in regard to size and population. In some the population is so large that two or more teachers are employed, and the schools are well graded. It is not of this class that I wish to speak. I intend to confine myself to such schools as have but a single teacher. In such schools we find anywhere from five to eighty pupils, with an average enrollment for the year of about forty and an average daily attendance of about twenty-five. The school affairs within the district are managed by a board of school directors, three in number, one being chosen each year. They employ any teacher they choose, if only the teacher has a county or state certificate; they pay such wages as they please; they adopt text-books, and rules and regulations for the government of the schools; they may dismiss teachers for incompetency, negligence, or immorality; they may suspend or expel pupils for gross disobedience or misconduct; they may levy taxes for the support of schools, not exceeding two per cent., on the taxable property of the district; they may determine what branches shall be taught, subject only to the limitation of the law, which says that the schools shall be for instruction in the branches prescribed in the qualifications of teachers, to wit: Orthography, reading in English, penmanship, arithmetic, English grammar, modern geography, the elements of the natural sciences, the history of the United States, physiology and the laws of health, and in such other branches, including vocal music and drawing, as the directors, or the voters at the annual election, may prescribe.

We have, then, in each district a school-board with most ample powers of control and of taxation, although there are a few sparsely settled districts in which the taxable property is so small in amount that the two per cent. tax will not yield a revenue sufficient, when supplemented by the income of State tax and the different school funds, to maintain a school for eight months in the year. The possible course of study, too, is as extended as could be asked; in fact, under the same law, some districts with pupils enough to warrant it, do maintain high schools every way worthy of the name.

The law gives the people the power to raise money to build and furnish school-houses. The law makes the minimum school year 110 days, and the directors have the power to keep the school in operation nine months. The schools are open to all residents between the ages of six and twenty-one. Such are the conditions surrounding the country school in Illinois. That the improvement made in these schools during the past twenty-five years has not kept pace with that made in city schools will, I think, be admitted by all who know the facts regarding their condition. As a rule the graded schools are much superior to the ungraded in all the essential elements that go to make up a good school. There are evidences of this superiority on every hand. Parents, when able to do so, eagerly seek to secure for their children the advantages of the graded schools, by sending them to neighboring cities and towns, paying for their tuition, and often for their board, or sending them back and forth several miles each day. Another evidence is, that when a country district school is better than the graded school near by, the fact at once becomes a subject of general comment, just because it is unlooked for,—is, in truth, the exception to the rule. Again the difference is seen when pupils from the country districts enter graded schools. Although it is found that they have advanced further in the text-books used than pupils of the same ages in graded schools, the discovery is soon made that when judged by what they are prepared to do, rather than by the number of pages that they have been over, they are lacking in the necessary preparation to enter classes composed of pupils of the same ages with themselves. The causes of this difference between graded and ungraded schools are not difficult to find. Let me briefly call attention to some of them.

In some districts the population is sparse and the amount of taxable property small; so that taxation up to the limit fixed by law, and supplemented by the proceeds of the State tax and the school funds, does not afford, in many large districts, adequate support for a school of high character, nor for a school of any kind, for scarcely more than the minimum term. As the population has increased in many localities, the people seem to think more of having a school close by their doors than of having a good school, and large districts able to sustain excellent schools have been split in two, and a multitude of small districts, each barely able to sustain with difficulty a poor school, is the result.

Another potent cause of the inferiority of ungraded schools, as compared with graded, is the frequency of changes of teachers. Five per cent. is probably a small estimate for the changes made during a school year in the teachers of graded schools, and probably not more than ten per cent. are changed, comparing one year with the next. In Illinois thirty-seven per cent. of the teachers are replaced by other teachers during the year. This is the average for the whole State. One county superintendent writes that one school changed teachers four times during a seven months' term; and he adds, needlessly perhaps, "they didn't have much of a school after all." Another superintendent says: "Some schools have three terms a year, and a new teacher each term." Another: "It is a rarity for a teacher to teach in the same district two or more successive terms."

The evils of such frequent changes are apparent. It is simply impossible for one teacher to take up, without break or delay, the work in the school-room just where his predecessor dropped it. It takes time for him to adjust himself to his new relations; it takes more time for him to find out what his pupils already know, and how to classify them, for it is rare that he will find any trustworthy record of what the former teacher has done. It takes still longer for him to find out something of the capacity of his pupils, and so to adapt his instruction to their abilities and peculiarities as to secure valuable results. With all this pioneer work, not much is likely to be accomplished in a term of three or six months; and, if time for such work must be taken by a new teacher each term, it ceases to be strange that the country schools do not accomplish more,—it is rather a wonder that they do so much.

Another reason why the country schools are not more useful,—a reason which, in part, is a natural result of the frequent changes of teachers,—is, that usually they do not have even a semblance of a course of study. The teacher who stays but one term in a school, no matter how excellent a teacher he may be, can do no more than make a beginning; and the next teacher has different plans, or none at all, so that much of the teacher's strength is wasted in ill-directed efforts, and much of the children's time is frittered away in false starts and in retracing their steps. This would be bad enough, if the only purpose of the school were to teach the children certain facts and rules, to name the letters and "do the sums;" but when we reflect that the great purpose of education is the thoughtful and systematic training and developing of the pupils' faculties, the slip-shod, hap-hazard way of conducting a school, with no plan and no well-defined purpose, seems sadly inconsistent. The reasons given above for the inferiority of country schools all combine to make such a school a less desirable place for a teacher than a graded school. Teachers who have spent years in study, and have had both professional training and experience, and have made teaching their vocation, seek better wages and a more permanent position than they can get in a country school. Teaching is their business, and they wish to be regularly employed more than six months in the year. Even when the pay is no better, the fewer and better defined duties of the graded school make it a more attractive field of labor than the ungraded school. Besides, in a graded school a teacher has a better chance to measure himself with other teachers; his work is usually supervised and reviewed by competent judges, and he is constantly stimulated by knowing that his work will be carefully compared with that of his co-laborers. The natural result is that vacancies in the village and city schools are carefully looked after by the teachers in the country; the board of education can generally have its pick from half-a-dozen applicants for the same place, usually all teachers of experience; while the board of directors of a country district, though it may have several applicants for the school, will seldom find among them persons of well-established reputation as teachers. The multitude of young men and women who drop into teaching as a make-shift, who keep school a term to get a little money while waiting for something to turn up,—the great number of worthless teachers whose only chance to secure a school is to offer their services so low as to defy competition, who do not even have the hardihood to expect to be wanted a second term in any place, and whose work will not bear the light of intelligent criticism,—these almost all find employment in ungraded schools; and so, to all the disadvantages of country schools there is added this greatest of all. that far too large a proportion of the teachers employed in them,—being themselves comparatively ignorant, inefficient, and totally devoid of more than a passing, selfish interest in their work,—do little or nothing toward giving the children unfortunately under their charge the "good common school education" guaranteed by the State.

Having for ten years held the office of county superintendent of schools, and having during six of these years given my whole time not occupied in the discharge of other duties pertaining to the office to the visitation of schools, it may not be out of place for me to give, in this connection, some illustrations of school work obtained from personal observation. I was surprised to find, early in my experience in visiting and examining country schools, that very many of the pupils (I should say a majority) were attempting work for which they were not prepared. The main thing with a majority of the teachers seemed to be to have the words of the text-books committed to memory and recited, more attention being given to the words than to the thoughts they were intended to express. As a result the reading exercises were mechanical and monotonous, and the other recitations dull and wearisome to both pupils and teacher.

In one school the first question I heard asked in mental arithmetic was: "If three apples cost twelve cents, what will one apple cost?" The pupil addressed answered: "If three apples cost twelve cents, one apple will cost three times twelve, which are thirty-six cents." The other members of the class did not express any surprise at the explanation and answer until the teacher said: "No, that is not right; that is the way you did the examples yesterday in the last lesson; but in doing these you must not multiply, you must divide." And so on with all the recitations,—many words, and but little interest or thought. After school had closed I took occasion to show the teacher in what respects I thought she had failed,—that the pupils should not have been told to multiply or divide, but that they should have been led to think whether the one would cost more or less than the three, and to determine for themselves whether they should multiply or divide. She saw her mistake, but, said she, "I never before realized that I was doing such poor work. I had no difficulty in obtaining a certificate, and I have taught this school for several years, giving general satisfaction to parents and pupils, and I really thought I was a pretty good teacher."

In another school, taught by a gentleman who was a good scholar, I found a class of girls nearly grown, who had laid aside their ordinary reading-books and were, during their last year in school, reading their United States History in course, and were then reading about the Great Rebellion. After one had read a sentence explaining some movements of the Union army, containing these words, "It was feared the rebels would obtain possession of the heights commanding Washington," I took the liberty of asking them what they understood was meant by the "heights commanding Washington." I wanted to see if they knew that just across the Potomac, opposite Washington city, were Arlington Heights, and that the enemy, once in possession of these heights, could bombard the city therefrom. They seemed much surprised to hear such a question. None answered. I continued, "You have been reading history all winter, I understand, and you must have some opinion regarding the meaning of these words. They certainly mean something. Please tell me what you *think* they mean." After considerable urging, one girl signified her willingness to answer, and said, "I think it means that General Washington commanded." Evidently they did not realize what they were reading about, and had not much definite knowledge of the place occupied by General Washington in the history of this country. I remember that the teacher and school directors, who had gone with me to the school, were surprised and annoyed at the little understanding the pupils had of the language they used. The teacher, after hearing other classes and pupils recite,—all of whom seemed too far advanced in their books, using language they did not comprehend,—called for his class in primary geography. The teacher asked the questions, and the pupils gave, with considerable gusto, the answers given in the book. When the lesson was ended, the teacher looked at me with a look of satisfaction, as much as to say, "Well, they know what they are about, if the other pupils did not," and asked me if I would like to ask any questions. I gave an affirmative answer. Most of the questions asked were like the following: "Which is the most populous of the Eastern States? which of the Western States?" etc. I therefore repeated the question, "Which is the most populous of the Western States?" They promptly replied, giving an answer in a full sentence, as was proper. "Ohio is the most populous of the Western States." Good. Now, can you tell me what that word "populous" means? You say Ohio is the most populous. Now, what does that mean? They looked at me in astonishment. The teacher, directors, and school, all waited intently for an answer. None came. I then said, "Now you have learned that Ohio is the most *populous* of the Western States, but you don't know much about that State after all, if you do not know what that word means. Well, what do you think it means?" Finally one boy put up his hand, signifying that he would venture an answer. I said, Well, what do you think it means? "I think it means they raise the most wheat and corn there." Of course all were surprised that none of the class knew the meaning of the word "populous." But the fact is not at all surprising. The word was evidently a new word to them, and was simply one of a large number of words used which had no definite meaning to them. They were so in the habit of repeating words and definitions they did not understand that there was special reason why they should know the meaning of this particular word. Had they been taught to understand and get the meaning of new words, as they occurred in their lessons, they would have inquired as to the meaning of this new word when learning or reciting the lesson in which it occurred.

After the close of school one of the directors said to me, "I am quite surprised to find that the pupils know so little of the meaning of the language of the text-books, and that the teacher has so neglected to teach them the meaning of the words they use daily. We have all had our eyes opened to see the true character of our school by your visit. I would not have missed what I have learned about our school to-day for many times what it costs to pay you for coming. Why did you not come earlier? Our winter school is now nearly over, and the good effects of your visit will be lost, as our teacher will not teach here next term." I replied that I could not well be in two places at the same time; and as it was necessary to devote my whole time to the visitation of schools, to visit them all even once, some must be visited late in the season. He saw the point, and said there ought to be two superintendents for so large a county, in order that each school might be visited by the same superintendent twice each year. Many times I found pupils committing and reciting page after page of a text-book in geography, repeating, in answer to the questions in the book, "Geography is a description of the surface of the earth," and "The earth is round, like a ball or orange," who not only could not define, but did not know the meaning of the words "surface" and "description," and who were quite certain they had never seen any part of the earth which was "round, like a ball or orange." And when asked to point toward the earth, some said they did not know where it was, some pointed upward, and in one instance several pointed to the globe lying on the teacher's desk, saying, "There it is." In another instance, after the class had recited the lesson assigned from the text-books, the teacher asked such questions as: "In what country do you live? Of how many States is it composed? In what State do you live? In what county do you live?" etc. When they had finished answering these questions promptly and accurately, I asked them if they knew how large the county is in which we lived. They answered they did not. I asked them if they would like to know. Upon receiving an affirmative answer, I told them I would try to help them to understand how large it is. As they were living only seven or eight miles from the county seat, I asked if they had been there. Most of them could tell me how many schoolhouses they had seen, and about how far apart they were. I then told them that I usually visited two each day; that I had been traveling all winter, and had not yet seen all in the county; that there was one every few miles; and that I could go in one direction twenty miles and still be in the county, and in another direction fifteen miles, and in another direction still twenty miles; and that it took me almost all of the year to visit all of the schools once. After thus talking with them until they had become considerably interested in thinking of the size of the county, I said to them, "Well, now you know about how large St. Clair county is. Which do you think is the larger, St. Clair county or the State of Illinois? And the class answered, "St. Clair county."

To give a single illustration more: In the geography used in another school there were given on the maps six of the principal cities of each State. The pupils were required to learn and name these principal cities for each State. After the recitation was concluded I asked the children to tell me what a city is, and to tell me of one they had seen. Most could define a city and name one they had seen. When I asked them how many cities there are in Illinois, they said, Six. How many in New York? Six. Do you not think there are more than six? No; six.

In the same school, located eight or ten miles east and in sight of St. Louis, I asked the direction to that city, and how long it would take a man to drive there with a horse and carriage? They gave the correct answer; but when asked the direction of New York and how long it would take a man to drive there, they gave the direction correctly, but thought it would take three or four hours to drive there.

I know very well that the work of our best teachers might be condemned if judged by the blunders made by some of their dull or stupid pupils, but those to which I have referred were made by whole classes of bright boys and girls, and were the legitimate result of a lack of skillful teaching. Their teachers were mere school-keepers, who did little more than hear the pupils recite the words they were required to commit to memory. Do any say that the statements made and incidents given indicate the condition of only a few schools, which are but exceptions to the rule? For the sake of the schools I wish it could be truthfully said that such so-called teaching is rare. The truth is, it is much more common than many believe, but the fact should not surprise any who reflect that most of the teachers entering the schools each year have a very limited education, and no special preparation for teaching. We get each year some teachers from our high schools and academies, some from our colleges and seminaries, and all our normal schools are doing what they can to furnish us with teachers. But when we have received each year, from all these sources, all we can get, not more than one-half, possibly not more than one-third, of the vacant country schools are supplied; and the other half or more are taken from the country schools themselves, in which they have generally received only elementary instruction. They are excellent raw material from which to make teachers, but until they have had further education and special training, or have acquired experience, they are not such teachers as are needed in the public schools. To say otherwise is to hold either that there is no science and art of education, or that by some intuition or instinct a knowledge of all this comes to the young teacher as he crosses the threshold of the school-room,—a position so far contrary to all theory and experience that it is absurd. The practical question is, Have the States any duty in the premise? In their constitutions they have deliberately committed themselves to the theory that the State should undertake the public education of its children. By the laws enacted they have established systems of public schools. For the support of these schools the people are taxed. The State practically compels the people to educate their children in the public schools; for private schools supported by tuition fees cannot live by the side of free schools, except in large cities and towns, and but few people can afford to pay their school-tax and at the same time pay for their children's tuition in private schools, especially if, as is usually the case, they must bear the expense of keeping them at school away from home.

Having done thus much, the next step seems, not only logically but imperatively to be, to see that good teachers are provided for the public schools. The State has already done something in this direction, but the facts that I have given show that it is necessary for it to do more. If the State takes the people's money it is bound to see that, so far as possible, the people receive full value therefor. If the well educated and carefully trained teacher is worth twice as much as the ignorant, untrained teachers, the State should take effective measures that the school-money be not wasted upon teachers of the latter class. If the State, by increasing the number of its normal schools, can, with only a comparatively small outlay of money, increase largely the number of trained teachers, and not only that, but through the influence of these do much to raise the character of the teaching in every neighborhood where they are employed, then it should provide for training teachers in this way, instead of training them in the school-room with much greater expenditure of money, and of what is worth more than money,—the children's years of study. But under the most favorable circumstances it will be a long time before we get a well-trained corps of teachers in our country schools. The people must be led to see the need of such teachers, and what is equally essential, must learn that such teachers should be paid higher wages. And, meanwhile, other agencies must be evoked and made to contribute to the end in view. Supervision of the schools of a city is regarded of first importance, and is carefully provided for; but there are reasons which make the supervision of country schools essential that do not exist with reference to city schools. The country school is isolated, so that the teacher has little or no opportunity to compare his work with that of other teachers, and no one to whom to go for advice. The country school has usually no course of study; and, more than all, the country school-teacher must teach the whole round of branches from the First Reader to algebra and botany, and children of all ages from six years to twenty-one. Compared with this complex task, the city teacher's work is simple. If he needs the assistance of the constant supervision of the principal, of a visit now and then from the superintendent, and of an institute every month, when he has but a single class of pupils or at most two of about the same age and receiving instruction in the same branches, the country teacher has ten times more need of the help that he may receive from practical supervision.

There would still be much need of school visitation if there were a competent teacher in every ungraded school. "Even the best masters will not do so well without this aid as with it," is the opinion of the English Commissioners of Education. "A school," says Everett, "is not a clock, which you can wind up and then leave it to go of itself." But what makes the necessity of supervision still greater, and improvement of the country schools almost hopeless without it, is not merely the fact that the greater part of the teachers have so little education, but the fact that they have had no training for their duties; and the further fact that so soon as they have acquired a little experience as teachers, they quit teaching and are succeeded by a new corps, as poorly educated and without special training. If the day of miracles is past, it is folly to expect that a young man or woman with but little knowledge, with no acquaintance whatever with the principles and methods of education, and no one to advise him except the average school director, can take a school with forty pupils pursuing seven studies, perhaps more, in twenty or twenty-five classes, and teach with any system or with any great profit to the children. When we add to this that this teacher is changed for another equally lacking in qualifications at the end of each year, very likely at the end of each term, it is no wonder that the pupils make but little progress from year to year; that they do not receive any mental discipline; do not learn how to study, and do not form careful habits of thought.

Accompanying good school supervision is the teachers' institute. From what I have seen and learned of teachers' institutes, I am convinced that their efficiency and influence for good upon the people and upon the teachers, and through them upon the schools, depend very largely upon the intelligence shown by the county superintendent in planning the work and in adapting it to the needs of the teachers; the best arranged, best conducted, and most largely attended in proportion to the number of teachers employed, being almost invariably found in the counties in which there is the best supervision. In short, I believe it to be true, as another has said, that "the institute of a county is a fair index of its educational rank."

The commission sent to this country in 1876 by the French Government to examine into and report upon the school systems and educational methods of the United States, in their report say: "The characteristic trait of the country school is the absence of regular organization. The courses of study in country schools are still at their first attempts. There is no uniformity whatever; every teacher makes his own course, and prescribes its duration."

It seems like repeating the letters of the alphabet to say that a school should be classified; that there should be a plan of work so arranged that pupils may have regular times for recitation and for study; that there should be a gradation of classes, so that a pupil may proceed from one to the other in an orderly way, each class being the natural antecedent of the class that follows it; and that there should be a record made and kept of each pupil's work each term. But it is just this elementary work that still needs to be done in the greater number of the country schools.

The good results of carefully grading the country schools would be many. A great deal is lost in these schools because of the irregularity of the attendance. The average daily attendance in the cities is about seventy per cent. of the annual enrollment. The average for the State is only sixty-one per cent.; so it is probable that the average for the country schools is not above fifty-five per cent. If each pupil knew that he belonged to a class, and that his staying in that class would depend upon his regular attendance, he would be much more anxious to be present every day. Parents, too, if they understood that their children would each term and year make regular progress in their studies, would more readily appreciate the necessity that their children be in school all the time, and would not take them out or let them stay away without good cause. Again, when a pupil goes over the same ground term after term, he loses his interest in the school, and his parents fail to see the advantage of his going to school any longer; so he drops out, having received very little benefit from the public school. A definite course of study, to be completed in a certain time, would keep such pupils in school longer, and do much to demonstrate to parents that the money they pay for school-taxes is wisely expended. Without a course of study, very many pupils study arithmetic, and little else, after they have learned to stumble over a reading-lesson. Arithmetic has its uses and should receive considerable attention, but it should not usurp all the pupil's time. It is worth much to a man to be able to buy his groceries and dry goods, and sell his corn and wheat and stock without making blunders in addition, subtraction, multiplication and division; but it is worth at least as much to him to be able to put his thoughts into plain English, and to read a newspaper or book without skipping the hard words and with a fair understanding of the author. And if the State educates the children so that they may grow up into good citizens, more time for grammar and reading and history and geography, and less for arithmetic, is desirable. In this respect the education of the common schools should be better balanced; and grading them would promote this end, by giving each study more nearly the due amount of attention and by giving it attention at the proper time. If a school is not graded, and no record is kept of the pupils' progress each term, a new teacher coming in unacquainted with the children is at a great disadvantage. It will take him a week, probably more, to get fairly under way; and in this way alone it is safe to estimate that five per cent. of the school year is lost.

Again, without grading, the teacher's efforts are usually divided among from one and one-half to twice as many classes as are needed. There is no danger that in a country school of forty or fifty pupils of all grades the classes will be too large; so whatever is gained by diminishing the number of classes is clear gain. Every teacher will appreciate the advantage of having fifteen and twenty minutes for a recitation, instead of ten and fifteen. There are many other advantages that will follow from grading the country schools, but they will occur to every one who will consider the subject, and many of the difficulties that seem to lie in the way of doing it will disappear if the attempt is made judiciously and persisted in long enough to give the grading a fair trial.

I know that there are in very many of our country schools excellent teachers, and from an intimate acquaintance of twenty-five years with the schools and school-teachers I am glad to bear testimony to the progress that has been already achieved. But it does not become us to rest satisfied with what has been done when so much better things are possible.

That the teaching in all these schools for the people should be of a high character such as to aid in making the millions of children coming under their influence upright, well informed, and industrious citizens; that the schools should help to bring out and develop and strengthen whatever is best in the children who attend them, is self-evident,—unless it be denied that the intelligence of a people is the principal source of its wealth, prosperity and happiness. While the teaching of to-day is, as I believe, take the country as a whole, vastly better than it was twenty-five years ago, and an improvement on that of ten years ago, we still fall far short of putting a good teacher in every school-room.

Until that is accomplished, or at least until teachers, school officers, and parents are awake to the advisability of accomplishing it, there will be sufficient reason for referring, in behalf of the cause of education, to the necessity for good teachers; for, after all, the efficiency of a school depends mainly upon the efficiency of the teacher. With a good teacher, a good school is possible under almost any circumstances; with a poor teacher, a good school is impossible.

With wise legislation to secure more schools for the training of teachers, and a more thorough and intelligent supervision of the schools, and a system of teachers' institutes whose influence should be felt in every part of the country and with a better grading of these schools, they would soon rank among the best; for nowhere can better material for the impress of the teacher's skill be found than in the ungraded schools of our land.

I cannot more appropriately conclude this paper than by giving the following extract from an address made by General Garfield before the National Association of Superintendents in Washington in 1878:

"It is a matter of great gratification to me to meet gentlemen who are engaged in the work of education. I feel at home among teachers, and I may say I look back with more satisfaction upon my work as a teacher than upon any other work I have done. It gives me a pleasant home feeling to sit among you and revive old memories.

"There is one thing to which I will venture to call your attention, and that is the great case, if I may speak as a lawyer, which is soon to be tried before the American people,—the case of *Brains* vs. *Brick and Mortar*. That, in my judgment, is to be a notable trial, and unless the cause is fully argued and rightly decided we shall have no end of trouble in our educational work. To insure its final and rightful settlement the friends of our schools should unite to force the question to a hearing, and should go to the very bottom of the controversy. It has long been my opinion that we are all educated, whether children, men, or women, far more by personal influence than by books and the apparatus of schools. If I could be taken back into boyhood to-day, and had all the libraries and apparatus of a university with ordinary routine professors offered me on the one hand, and on the other a great, luminous, rich-souled man, such as Dr. Hopkins was twenty years ago, in a tent in the woods alone, I should say give me Dr. Hopkins for my college course rather than any university with only routine professors. The privilege of sitting down before a great, clear-headed, large-hearted man, and breathing the atmosphere of his life, and being drawn up to him and lifted up by him and learning his methods of thinking and living, is in itself an enormous educating power. * * * * *

"And so in our schools let us put less money in great school-houses and more in the salaries of teachers. Smaller schools and more teachers, less machinery and more personal influence will bring forth fruits higher and better than any we have yet seen."

THE NECESSITY OF EDUCATION FOR THE WORKING-WOMAN.

BY EVELYN DARLING, YELLOW SPRINGS, OHIO.

By education I mean the progressive, symmetrical development of the individual, and by the working-woman every woman who by her own labor earns her own living. Work is endless, and therefore the worker should be so developed that faith and hope would be as endless. I believe that all will admit that, as a whole, the work of the world is dignified and holy. Thus, at the beginning, we have a high standpoint from which to survey the practical divisions and gradations of labor among all those who perform it.

All persons, men and women, need to reach a certain plane of intelligence before they can do work with satisfaction to themselves or safety to others. This probably applies with especial force to woman at present, because, on account of her position from ancient times until now, she has been inclined to act without sufficient previous thought. The use of powers without their education has been, and will be, most dangerous. The intuitions of woman may still be trusted, and yet her wise judgment demanded and provided for. Because as the mother is more widely intelligent, so may the unconscious nature of the daughter be more trustworthy. The mother has *talent* for excellence of life; the daughter may have *genius* for excellence of life.

Probably better and wiser work will not be done in the world, until wider and deeper thinking is prevalent, enabling people to act from more knowledge and therefore with more enlightened consciences And how can a vacant mind think?

A company of people hear a lecture. Each person gets from it light and help in proportion to his mental receptive ability. To one it is food and new strength; to another, perhaps only a succession of sounds that induce sleep. Until woman is sufficiently educated to see what is in the work she has to do, what it contains of power to help herself and those for whom it is done, she will not reach her highest value.

An appreciation of the dignity and worth of honest and necessary labor is, considered with respect to nations, a product of Christian civilization. With respect to individuals, my own observation has been, that the person most reliable for helpfulness, whether called upon to consider deep, mental questions, or to do the work of a household from cellar to garret, is nearly always the person most thoroughly educated. Many persons of extensive experience with whom I have talked have given me the same testimony. Considering working women as a whole, they do not so much lack energy and activity, as knowledge which shall direct their energy and make their activity wise. Scientists say that the moral faculties are the last to be unfolded; they represent the flowering of humanity.

The individual, then, must be led out in *every* direction before he can have sufficient data to form, concerning his life and its duties, the best judgments. Just as a great man could not rise up, state his fine premises and make his grand deductions, unless the long and patient *in*ductions of generations before him had made it possible; so in the individual, the best activity cannot be secured without the long and patient preparation of study and thought.

Some aggressive women have brought the ridicule of men upon themselves and often upon their cause, by advocating their theories, regardless of reason or facts. *Utter* nonsense, with no assumption of knowledge or reason, is said to be effective in gaining the approval of some men; but when the acknowledged object is to convince the reason, men cannot be blamed for demanding that a woman should speak from facts, logically considered.

We sometimes hear that education is getting to be much valued among us for its own sake; but this is likely to be the view of those who have spent their lives among people of far more than average culture. When their employments lead them out among the ordinary masses that make up society, they are surprised to find how little education is really valued.

It often happens, in this country especially, that young women suddenly find themselves thrown upon their own resources for a livelihood. Now the great reason why they are so restricted in the kinds of work they can do is found in the faulty education they have received. If the few things they can do fail, they have no power to adapt themselves to any thing else. Behind their training was always the idea that they needed, for such lives as theirs would be, only certain things, mainly drawing-room accomplishments and a few household qualifications; and in these latter, alas, no sound knowledge of any branch of learning, not even of physiology, was deemed necessary. In teaching they do but the poorest work, for their untrained minds cannot be relied upon to find out what they do not know. A friend told me of a gentleman teacher who addressed one of his classes thus: "You may provide yourselves with French books; *I* expect to begin the study tomorrow." Pupils of much advancement very soon know the mental resources of a teacher. If, at any point, her knowledge is not equal to their demands, they know well whether or not she is able to find out what she does not at the moment know.

I once knew a young woman who said, when asked how she expected to get on in the world without some knowledge of arithmetic, "Oh, my husband will keep all my accounts for me." At the time she had no particular husband in prospect, and only spoke from what she considered general principles. To be sure, many think that women of very inferior acquirements will do well enough to begin the mental training of children; but one great difference which a thoughtful observer will see between the educated and uneducated teacher is in just this matter of teaching *children*. The educated person, alone, will realize how important are beginnings, and what years of dissatisfied striving the student may be saved by competent teachers. In all the schools I have known, it is the children taught by well educated teachers who have done the best work, and who have been just as free and happy in their work as in their play. Every earnest student of humanity knows how hard it is to influence average men and women to change even the least of their habits. How surely all our hope lies in the young! We *cannot* begin too early to surround our children with beneficent influences.

The masses are not sufficiently enlightened to demand the best work from their teachers. They erect costly school-buildings and then save (?) the money out of the salaries of those who work for them. But the excellence of a few educators must be relied on to create a demand for more. In this case the supply must create the demand. In every department of activity, it has always been the best work which has impressed people, which has lived most triumphantly in their hearts and lives. What really good thinking or living would be likely to come from the girl who thought it unnecessary to study arithmetic, because her husband would keep her accounts for her? Is it not the best thing for any human being, to give him or her the best education possible under the circumstances, entirely irrespective of sex or any outward condition? It may be said that a servant-girl can wash, iron, sweep, and perhaps cook as well without education as with it. I deny emphatically that she can cook as well; but grant it all to be true, she can not live her own life as well, and certainly she is an unsafe assistant in the care of children.

Not long ago, a Swedish girl told me that when she came to this country her sleeping-room was so low that at every hard rain the water would be several inches deep on the floor. Her mistress told her that if the police inquired about her sleeping-room, to tell them that she slept quite above the ground. The girl only knew that it was uncomfortable, but had no knowledge whatever of the physical and mental effect upon herself, or in the years to come upon her children; and this girl was naturally brighterthan the average of her class. The welfare of the family is too much in the hands of girls like this, safely to leave them ignorant. They know almost nothing of the value of proper food, warmth, and pure air to the human frame. Because of ignorance, they have no resources peculiarly their own, and of which nothing can rob them. Their work means little but mere drudgery which they must finish as soon as possible.

I lately asked a thriving lawyer, in one of our large cities, what he thought of the obligation to educate the so-called laboring classes. He assured me that he thought if the masses were insured a better education there would be no one to perform the manual labor. Kitchen girls, especially, would be impossible to obtain. It certainly seems clear that nothing else than more thorough and extensive education among the "higher classes" will ever remove the false bases upon which people stand, will ever set up reasonable standards of judgment. More education among *all* classes would make absurd and impossible the idea that, among people *striving* for power to do well and faithfully the work for which they were best fitted, one person was, intrinsically, more to be honored than another. In every case, the most thoroughly cultured people I have known were quite willing to do any necessary work, with *no* feeling, however remote, of being degraded; and all really excellent servants in the employ of such people are generally abundantly honored.

A lady once said to me, "I rarely look at a common person. I can't tell one from another when I do. Their faces seem all alike to me." She said this as we met some day-laborers in the street, going home from their work. Truly, one who can make such a remark has "faculties which she has never used." A child born is a child of all the ages, with their people and events, that have been before him. What an ancestry! What an inheritance! Surely the only thing to do is to find out and enter upon what portion of this grand inheritance we may in our short life; and who can tell from what source an added legacy may come? Who can talk of "common people"? I cannot but think that the false standards by which people judge are largely to blame for much of the poor work and disappointed workers in the world. Many who have good talent for certain lines of work will not do that work, because it is looked *down* upon by a certain class. With wiser minds would come higher points of outlook, clearer judgment; removing the temptation to persist in work unfit for the capacity.

Jean Ingelow, in a letter to an American journal, says that she considers one great problem for American women to work out is how to combine domestic work with high culture. She thinks nothing like universal education will be possible as long as the practical judgment regarding the different kinds of labor is so crude and superficial. But it is not likely that anything except a more universal education will change the judgment. Some more *time* might certainly be gained for general culture, if we would simplify our lives. All working women must find time for study and thought, else they become mere machines upon which there are never any improvements. What work is necessary to be done? This question confronts earnest women, everywhere. How are they to answer it?

A friend told me that as she walked among the hills about the town of Heidelberg, the cathedral and spire belonging to a neighboring city across the Rhine came into view, while yet the city could not be seen at all. When it was reached, the difference between the height of the buildings seemed by no means so great. It had occured to her, she said, while approaching the interesting old city, that distance, either of time or space, was necessary in order to estimate relative values correctly. Now, wise and long continued study and thought elevate the whole mind and character to a plane entirely above and beyond the plane of life as it would be without such study and thought. Slowly, as the plane of life rises higher, it is easy to see what for the sake of truth and love we *must* do. Our privileges and duties send up their cathedral spires.

To see a few things *as they are* is rare enough and impressive enough to inspire great earnestness and singleness of purpose in the beholder. Such a person, simple in his wants, will be, in some degree, independent of patronage; and it is often utterly ruinous to bring one's work down to the popular demand.

Working-women must convey the impression that they are reliable, to be depended on for good and continuous work. In the first place, sound health is a necessity; but the mind has so great influence over the body that health is very insecure when the mind is untrained. It would seem that the body would be strongest, most sure and natural in the discharge of its functions, when its life was guided by a combination of all the best qualities of the mind and heart. But study in many directions and patient reflection must be added to daily experience in order to develop these qualities so symmetrically that there shall be power under trying circumstances to preserve the mental balance, to furnish a refuge against calamity. Woman's sum-total of happiness would certainly be increased by thorough culture; for then, if the highest and best blessings of society and family came to her, she would inevitably get from them the most profitable experience to form noble character; and if such blessings did *not* come, she would be best able to do without them.

Lately, much is said, and doubtless needs to be said, about special training for the various departments of labor; that special schools for training women in the manual employments in which they engage are among the most pressing needs of the age. Garments cut by men and sent home to be made are said to be easily made; pieces intended to fit together are actually alike. Most ladies will admit that no such statement can be made of dress-maker's work in general.

Woman has not as yet, learned to know the business value of really thorough work. Men sometimes say of women, that they have no *business* conscience. If this is true, there may be some explanation to be found in the fact that the special education which, in general, she has recived, prevents anything like a logical habit of thought and work; so that neither conscience nor policy is brought to bear upon details.

The need of fitness for special work cannot be too much urged; but upon a large share of the world's laborers varied responsibilities come, and ignorance upon general subjects is as unsafe as a miner's lamp without its veil of fine wire. Then upon the human being rests the obligation to make the most of himself possible under the circumstances, both for his own sake and those who are to follow him. Consider the power gained by a *habit* of looking for the causes, reason, and results of things. If a student follows out clearly one subject after another, his faculties, aroused to action, will be likely to turn inward upon his own character. He will see that in all things there is an inexorable logic which he cannot escape. Unless he would be like a soldier out of step when the march is playing, he *must* identify himself with the great laws under the stress of which the whole universe moves.

This inevitable logic of things teaches us that everything which seems best *is* a law to us, and we cannot escape it, though we may transgress it. This sure relation between cause and effect affords a fair outlook for humanity, not only by furnishing abundant warning, but also reasonable and therefore helpful grounds of faith and hope. In this light, no thought, no action, however small, is unimportant. And so it would seem that one broadly educated could be trusted to perfect himself to a good degree in his special work; while one espcially trained at first would be unlikely afterward to be awakened to the need of general culture.

What to do to make general culture more widely possible is, without doubt, one of the greatest questions of our day; and perhaps, in a broad sense, it may be said to include all others. For the woman whose tastes and duties will keep her always studying the world, its thoughts, and its work, the prospect seems to include a good degree of promise. For all the lack of practical reasoning which the thoughtful observer is sure to see in the world, for all the surface judgment, the devout learner is to be especially the helper. She is to speak and live her convictions, and somebody will surely learn of her. Hers will be the old cry, "Prepare ye the way of the Lord." She will know that men and women *are* sons and daughters of God; that every generation may enter upon a still greater wealth of inheritance, an added fullness of life; that all things are accidents, compared with the position and purpose of the soul in this whole development; that without knowing this, men and women are as though digging forever in dirt after a few shining sands, while at their right hands are mines of gold.

So the student is peculiarly consecrated to his task; to learn his whole lesson, if it may be; at least to spend his strength in trying. There ought to be some strong word for all those who *must* take a share in the world's work. Rev. William R. Alger says that the first requisite for scholarship, in its highest sense, is a *teachable spirit.* This spirit is surely the one important possession for every individual, no matter what his circumstances. It seems at first that we should add persistence; but the teachable spirit comes from having had some vision of the beauty of truth, and he who has had such vision will be persistent.

HORACE MANN.

BY MRS. MARY MANN, BOSTON.

The American Portrait Gallery, published by Mr. John Livingstone of New York, in 1853, gives a sketch of the events of Mr. Mann's life up to the time when he left Massachusetts for Ohio, and being written by a friend who knew him well, does him justice in many respects, but it does not exhaust the subject. We speak of him here solely as an educator. He was born into a family that had a high estimate of education, but no means of securing its advantages to the sons or daughters other than the reverence for it which was inculcated from earliest childhood, and which was a tradition from "Minister Mann," as their English ancestor was designated. It was the boy's native endowment of talents that led him to educate himself as far as he could, for the teaching his town afforded was very meager. His undying thirst for knowledge goaded him on in spite of the toil and privation of his early life; and the eccentric Mr. Barrett, who had such enthusiasm for the languages, fanned his own into a flame. But then he was already twenty years old, and what leeway had to be made up! In this, as in other similar cases, the quality of the learner made up for the want of quantity in the learning.

The prevalent religious belief of that time was of that dark, dogmatic character that obscured the very heavens to the growing child full of the love of nature, and with native logical powers that must of necessity sift everything to the dregs. He had native wit, too, and that dramatic tendency which makes every bright child incline to represent what is about him in symbols of his own. He was taught to think almost any play or occupation wicked that exercised the imagination, but all the suppression in the world could not kill it out in him, and it survived only to torment him and render his childhood one scene of terror by the imagery that was constantly used to depict sin and its consequences. Children do not confide these difficulties to others, not even to a tender mother like his, and one who would never have her children baptized, because she did not like the doctrine that went with it; and though her education (or non-education) had been such that she could put nothing better in its place, she would not pledge herself or her children to anything she did not fully understand.

Many children grow up, even in this wicked world, *bathed in God*, if we may be allowed the expression, for the conception of God in earliest childhood is so natural to the soul that it only needs a hint to develop into joy and confidence, unless indeed it is perverted by surrounding influences into fear and distrust. If a mother, in whom a child has instinctive faith, has not clear ideas of her own, but is perverted by harsh doctrine, and has thus lost her own natural faith, she cannot fail to convey the impressions to a sensitive, sympathetic child like Horace Mann; and it is a fact, that a suggestion of Dr. Emmons at the funeral of Horace's beloved brother, a lad of fourteen, who was accidentally drowned, and who had not gone through the form of a religious conversion, so roused his indignation that, as he said, it made him *hate God*, and made his mother so unhappy that she did not smile for many years; and this produced such an effect upon Horace that it stirred his intellect, as a similar circumstance did Mrs. Stowe's, to question the doctrine, which he repudiated at a very early age, and gradually made his own system of ethics by which he at last grew into the light that irradiated his life. He was also helped to this by the circumstance that the best man in the town was a Universalist, and the logical mind of young Horace deduced from this fact that the religious views of the Universalists did not deserve such reprobation as he was in the habit of hearing expressed by the Calvinistic portion of the community. Truth is so native to the soul that even a child will choose it, if truth and error are fairly set before him. It was more consonant with his native conception of religious truth that all souls should be saved than that only a few should be favored by arbitrary election, which was the naked doctrine of that day. But I extract from Livingstone's sketch a letter of Mr. Mann's upon this subject of his youthful experience:

> "I regard it as an irretrievable misfortune that my childhood was not a happy one. By nature I was exceedingly elastic and buoyant, but the poverty of my parents subjected me to continual privations. I believe in the rugged nursing of Toil, but she nursed me too much. In the winter-time I was employed in in-door and sedentary occupations, which confined me too strictly; and in summer, when I could work on the farm, the labor was too severe, and often encroached upon the hours of sleep. I do not remember the time when I began to work. Even my play-days,—not play-days, for I never had any,—but my play-hours were earned by extra exertion, finishing tasks early to gain a little leisure for boyish sports. My parents sinned ignorantly, but God affixes the same physical penalties to the violation of His laws, whether that violation be willful or ignorant. For willful violation there is the added penalty of remorse, and that is the only difference.

Here let me give you two pieces of advice which shall be *gratis* to you, though they cost me what is of more value than diamonds. Train your children to work, though not too hard; and unless they are grossly lymphatic, let them sleep as much as they will. I have derived one compensation, however, from the rigor of my early lot. Industry, or diligence, became my second nature, and I think it would puzzle any psychologist to tell where it joined on to the first. Owing to these ingrained habits, work has always been to me what water is to a fish. I have wondered a thousand times to hear people say, 'I don't like this business;' or, 'I wish I could exchange for that;' for with me, whenever I have had anything to do, I do not remember ever to have demurred, but have always set about it like a fatalist; and it was as sure to be done as the sun is to set.

"What was called the love of knowledge was, in my time, necessarily cramped into a love of books; because there was no such thing as oral instruction. Books designed for children were few, and their contents meager and miserable. My teachers were very good people, but they were very poor teachers. Looking back to the school-boy days of my mates and myself, I cannot adopt the line of Virgil,—

> 'O fortunatos nimium sui si bona norint.'

I deny the *bona*. With the infinite universe around us, all ready to be daguerreotyped upon our souls, we were never placed at the right focus to receive its glorious images. I had an intense natural love of beauty, and of its expression in nature and in the fine arts. As 'a poet was in Murray lost,' so at least an amateur poet, if not an artist, was lost in me. How often, when a boy, did I stop, like Akenside's hind, to gaze at the glorious sunset; and lie down upon my back, at night, on the earth, to look at the heavens. Yet with all our senses and our faculties glowing and receptive, how little were we taught; or rather, how much obstruction was thrust in between us and nature's teachings. Our eyes were never trained to distinguish forms and colors. Our ears were strangers to music. So far from being taught the art of drawing, which is a beautiful language by itself, I well remember that when the impulse to express in pictures what I could not express in words was so strong that, as Cowper says, it tingled down to my fingers, then my knuckles were rapped with the heavy ruler of the teacher, or cut with his rod, so that an artificial tingling soon drove away the natural. Such youthful buoyancy as even severity could not repress was our only dancing-master. Of all our faculties, the memory for words was the only one specially appealed to. The most comprehensive generalizations of men were given us, instead of the facts from which those generalizations were formed. All ideas outside of the book were contraband articles, which the teacher confiscated, or rather flung overboard. Oh, when the intense and burning activity of youthful faculties shall find employment in salutary and pleasing studies or occupations, then will parents be able to judge better of the alleged proneness of children to mischief! Until then, children have not a fair trial before their judges.

"Yet, with these obstructions, I had a love of knowledge which nothing could repress. An inward voice raised its plaint forever in my heart for something nobler and better. And if my parents had not the means to give me knowledge, they intensified the love of it. They always spoke of learning and learned men with enthusiasm and a kind of reverence. I was taught to take care of the few books we had, as though there was something sacred about them. I never dog-eared one of them in my life, nor profanely scribbled upon title-pages, margin, or fly-leaf, and would as soon have stuck a pin through my flesh as through the pages of a book. When very young, I remember a young lady came to our house on a visit who was said to have studied Latin. I looked upon her as a sort of goddess. Years after, the idea that I could ever study Latin broke upon my mind with the wonder and bewilderment of a revelation. Until the age of fifteen I had never been to school more than eight or ten weeks in a year.

"I said we had but few books. The town, however, owned a small library. When incorporated it was named after Dr. Franklin, whose reputation was not only at its zenith, but, like the sun over Gibeon, was standing still there. As an acknowledgment of the compliment he offered them a bell for their church, but afterwards saying that, from what he had learned of the character of the people, he thought they would prefer sense to sound, he changed the gift into a library. Though this library consisted of old histories and theologies, suited perhaps to the taste of the 'conscript fathers' of the town, but miserably adapted to the 'proscript' children, yet I wasted my youthful ardor upon its martial pages, and learned to glory in war, which both reason and conscience have since taught me to consider almost universally a crime. Oh, when will men learn to redeem that childhood in their offspring which was lost to themselves! We watch for the seed-time for our fields and improve it, but neglect the mind until midsummer or even autumn comes, when all the *actinism* of the vernal sun of youth is gone. I have endeavored to do something to remedy this criminal defect. Had I the power, I would scatter libraries over the whole land, as the sower sows his wheat-field.

"More than by toil or by the privation of any natural taste was the inward joy of my youth blighted by theological incubations. The pastor of the church in Franklin was the somewhat celebrated Dr. Emmons, who not only preached to his people, but ruled them for more than fifty years. He was an extra or hyper-Calvinist,—a man of pure intellect,—whose logic was never softened in its severity by the infusion of any kindliness of sentiment. He expounded all the doctrines of total depravity, election, and reprobation, and not only the eternity, but the extremity of hell-torments, unflinchingly and in their most terrible significance; while he rarely, if ever, descanted upon the joys of heaven, and never, to my recollection, upon the essential and necessary happiness of a virtuous life. Going to church on Sunday was a sort of religious ordinance in our family, and during all my boyhood I hardly ever remember staying at home. Hence, at ten years of age, I became familiar with the whole creed, and knew all the arts of theological fence by which objections to it were wont to be parried. It might be that I accepted the doctrines too literally, or did not temper them with the proper qualifications; but in the way in which they came to my youthful mind, a certain number of souls were to be forever lost, and nothing, not powers, nor principalities, nor man, nor angel, nor Christ, nor the Holy Spirit, nay, not God himself could save them, for he had sworn before time was, to get eternal glory out of their eternal torment. But, perhaps I might not be one of the lost! But my little sister might be; my mother might be; or others whom I loved; and I felt that if they were in hell, it would make a hell of whatever other part of the universe I might inhabit, for I could never get a glimpse of consolation from the idea that my own nature could be so transformed, and become so like what God's was said to be, that I, too, could rejoice in their sufferings.

"Like all children, I believed what I was taught. To my vivid imagination a physical hell was a living reality, as much so as though I could have heard the shrieks of the tormented, or stretched out my hand to grasp their burning souls in a vain endeavor for their rescue. Such a faith spread a pall of blackness over the whole heavens, shutting out every beautiful and glorious thing, while beyond that curtain of darkness I could see the bottomless and seething lake filled with torments, and hear the wailing and agony of its victims. I am sure I felt all this a thousand times more than my teachers did; and is not this a warning to teachers?

"What we phrenologists call causality,—the faculty of mind by which we see effects in causes, and causes in effects, and invest the future with a present reality, — this faculty was always intensely active in my mind. Hence the doom of the judgment-day was ante-dated; the torments which, as the doctrine taught me, were to begin with death, begun immediately, and each moment became a burning focus on which were concentrated, as far as the finiteness of my nature would allow, the agonies of the coming eternity.

"Had there been any possibility of escape; could penance, fasting, self-inflicted wounds, or the pains of a thousand martyr-deaths have averted the fate, my agony of apprehension would have been alleviated; but there, beyond effort, beyond virtue, beyond hope, was this irreversible decree of Jehovah, immutable, from everlasting to everlasting. The judgment had been made up and entered upon the eternal record millions of years before we, who were judged by it, had been born; and there sat the Omnipotent upon his throne with eyes and heart of stone to guard it; and had all the beings in all the universe gathered themselves together before Him to implore but the erasure of only a single name from the list of the doomed, their prayers would have been in vain.

"I shall not now enter into any theological disquisition on these matters, infinitely momentous as they are. I shall not stop to inquire into the soundness of these doctrines, or whether I held the truth in error; my only object here being, according to your request, to speak of my youth biographically, or give you a sketch of some of my juvenile experiences. The consequences upon my mind and happiness were disastrous in the extreme. Often, on going to bed at night, did the objects of the day and the faces of friends give place to a vision of the awful throne, the inexorable Judge, and the hapless myriads, among whom I often seemed to see those whom I loved best; and then I wept and sobbed until nature found that counterfeit repose in exhaustion whose genuine reality she should have found in freedom from care and the spontaneous happiness of childhood. What seems most deplorable in the retrospect, all these fears and sufferings, springing from a belief in the immutability of the decrees that had been made, never prompted me to a single good action, or had the slightest efficacy in detering me from a bad one. I remained in this condition of mind until I was twelve years of age. I remember the day, the hour, the place, the circumstances, as well as though the event had happened but yesterday, when, in an agony of despair, I broke the spell that had bound me. From that day I began to construct the theory of Christian ethics and doctrine respecting virtue and vice, rewards and punishments, time and eternity, God and his providence, which, with such modifications as advancing age and a wider vision must impart, I still retain, and out of which my life has flowed. I have come round again to a belief in the eternity of rewards and punishments, as a fact necessarily resulting from the constitution of our nature; but how infinitely different in its effects upon conduct, character, and happiness is this belief from that which blasted and consumed the joy of my childhood!

"As to my early habits, whatever may have been my shortcomings, I can still say that I have always been exempt from what may be called common vices. I was never intoxicated in my life,—unless, perchance, with joy or anger. I never swore,—indeed, profanity was always most disgusting and repulsive to me. And (I consider it always a climax) I never used the 'vile weed' in any form. I early formed the resolution to be a slave to no habit. For the rest, my public life is almost as well known to others as to myself; and, as it commonly happens to public men, *others know my motives a great deal better than I do.*"

This aspect of Horace Mann's youth is dwelt upon here because only thus can his character be understood. His strong, logical powers made him reason out everything, and although he was looked upon as a little heretic then, and a great heretic later in life, the fact was that his religious nature was always in a great state of activity, and he must needs protest against views which he thought dishonored God and disgraced humanity. He worshiped in the universal temple of creation, which became more and more to him the manifestation and expression of God; and the wrongs of man, who crowns the work of creation, challenged all his sympathies and stimulated all his powers. He grew to feel that man had been defrauded of his birthright by the imposition of superstition and by unholy power gained over his sensibilities, and he set himself to breast the tide that was overwhelming him, as far as he could do it. He was afraid of nothing in the universe but bigotry,—that he abhorred, and that he combated to his dying day. Ignorance and Superstition,—these were the giants that devastated creation. From his earliest manhood, education was the weapon with which he fought them.

Mr. Mann's father having died when he was thirteen years of age, he remained with his mother on the homestead until he was twenty. But an irrepressible yearning for knowledge still held possession of him. "I know not how it was," said he to a friend in after-life, "its motive never took the form of wealth or fame. It was rather an instinct which impelled toward knowledge, as that of migratory birds impels them northward in spring-time. All my boyish castles in the air had reference to doing something for the benefit of mankind. The early precepts of benevolence, inculcated upon me by my parents, flowed out in this direction; and I had a conviction that knowledge was my needed instrument."

A fortunate accident gave opportunity and development to this passion. An itinerant school-master, named Samuel Barrett, came into his neighborhood and opened a school. This man was eccentric and abnormal, both in appetites and faculties. He would teach a school for six months, tasting nothing stronger than tea, though in this Dr. Johnson was a model of temperance compared with him; and then for another six months, more or less, he would travel the country in a state of beastly drunkenness, begging cider, or anything that would intoxicate, from house to house, and sleeping in barns or styes, until the paroxysm had passed by. Then he would be found clothed and sitting in his right mind, and obtain another school.

Mr. Barrett's specialty was English grammar, and Greek and Latin. In the dead languages, as far as he pretended to know anything, he seemed to know everything. All his knowledge, too, was committed to memory. In hearing recitations from Virgil, Cicero, the Greek Testament, and other classical works then usually studied as a preparation for college, he never took a book into his hand. Not the sentiments only, but the sentences, in the transposed order of their words, were as familiar to him as his A, B, C, and he would as soon have missed a letter out of the alphabet as article or particle out of the lesson. When a sentence in the Æneid, or in the Oration for the poet Archias (which was his favorite), had been torn and mangled by a bad recitation, it was grateful to hear him repeat it all over to himself, in the most soothing and motherly voice, as though he would bind up and heal its wounded and dislocated parts. Sometimes he would *croon* off (as the Scotch would say) page after page of the author, winding up each paragraph with such an inarticulate chuckle of delight as only a very fat man like him could give. It must have been to him that Mr. Mann referred when, in his controversy with the "Thirty-one Boston School-masters," he speaks of the inspiring effect of a teacher's knowledge upon the progress of his pupils. "I know that this ability of his inspired *one* of his pupils, at least, with sentiments of respect toward him, with conceptions of excellence, and with an ardor for attainment, such as all the places and prizes ever bestowed, and a life of floggings into the bargain, could never have imparted. I well remember that when I encountered a a difficulty either in translation or syntax, and was ready to despair of success in overcoming it, the mere thought *how easy that would be to my teacher*, seemed not only to invigorate my effort, but to give me an enlargement of power, so that I could return to the charge and triumph."

As Mr. Mann went to college late in life, and was obliged to earn his own living, his native logical powers naturally led him to the profession of the law. What he did at all he always did with a will, and though he would have preferred the pursuit of physical science, he became eminent in his profession, which he always considered the best training for truthfulness of character. He was thankful when the opportunity came to turn away from the task of weighing evidence which was intensely laborious to so conscientious a mind as his, to the more congenial investigation of the best modes of education.

Mere instruction was the smallest part of education in his eyes. The ruling of the spirit was the chief aim, and that the individual must be taught to achieve for himself. He had never heard of Froebel, but he was fully of the opinion that the earliest bent given to the character is the most likely to be the most lasting one, and when he came to have children of his own he realized it in full, and bent all his energies to begin aright. The order in which the human faculties should be developed had been a subject of theoretic study with him in sympathy with a friend who had a large school of young children, but with children of his own he was practically a good kindergartner, and great would have been his enjoyment of the perfecting of Froebel's system for the ends both of character and intellectual training. He gave his own children to the study of nature *in the things themselves* before the age for books. He made the love of knowledge a passion with them, and such was their enjoyment of his brilliant sympathy in their pursuits that they were never satisfied with the slightest acquisition they made till they had communicated it to him in full, and talked it all over with him. He took them to manufactories to explain the processes of the artisans, and cultivated every faculty, as it appeared, by conversation and by applying all needful appliances for practical working. They pressed and classified and made herbariums of the plants, gathered and found out the names of the stones, searched the sod and the river-banks for fresh water and land shells (not having access to the sea), stuffed and studied the structure of the birds, collected and identified the eggs, prepared skeletons of the frogs and the fishes, and this without a task in a book. When the eldest son entered the preparatory school of Antioch College, at the age of twelve, he was quite a little chemist, and was possessed of all the knowledge of that science (or more) which was comprised in the first year's study of it by the college classes. He volunteered his services at the table of the professor, and was accepted as a very efficient assistant. He had had his own private laboratory in his father's spacious cellar, where he performed his own experiments, something at the risk of blowing up the house, *but he never did it.* The only accident he ever had in his chemical pursuits was the flashing in his face of some gunpowder which he had made for a little cannon, and which he was testing with a fuse. It was thought he was disfigured for life, but the timely application to his face of a wet cloth, which he patiently endured for a day, saved his complexion. He and his brother next in age to himself built themselves a chimney of fire-brick in the cellar, and there smelted metals with a good foundry bellows, in imitation of a foundry in the neighborhood where they had learned the art. The father's luminous talks with them upon the never-failing topic of the glories and wonders of the universe made them precocious in language from a very early age, without the help of any formal exercises, preventing that confuson of mind so often seen in children of lively imaginations who are left to their own deductions from what they see unexplained, or crudely think.

When Mr. Mann first looked into the details of education in this country he was amazed at the condition of things,—at the deterioration that had taken place from the first impulse and action of the fathers to educate the people. He saw at once that the common school system was one which could redeem society if its possibilities were exhausted by vigilant and conscientious devotion to the cause, and he ended by calling it the greatest discovery of modern times, fit sequel to the discovery of the power of self-government in man, for he saw that it was the only condition on which a government founded on the consent of the governed could be successfully maintained. The universal vote must be not only an intelligent vote, but a conscientious one.

Education was at a low ebb at the West in his time. It has made giant strides since that day, and at present has a vitality and spring that is wanting in the more conservative East. Specially has the "New Education" (as Froebel's system is sometimes called) found a rich and answering soil in its great fields, and if the spirits of the departed have any cognizance of the scenes of their former labors, his own spirit must hover over the places his work made better in his life-time. Massachusetts seemed to have waked at last to his conception of the necessity of moral education, and when the "New Education" is thoroughly understood and appreciated,—which is not yet the case, alas!—we may expect glorious fruits. He agreed with Froebel, that Education, especially of early childhood, should be chiefly in the hands of women. When he began his labors in Massachusetts only one-eighth of the teachers were women, and those were wholly in the lower schools; when he left it seven-eighths of the teachers were women, and many of those in the higher schools. This good work went on till one of the normal schools was put in charge of a woman, under the engineering of ex-Governor Washburn, who was in full sympathy with his friend, who had passed on to other spheres, but had left his spirit in the hearts of his friends and coadjutors. And one of the finest teachers in the Boston School of Technology is a woman. He also came to feel, while acting as Secretary of the Massachusetts Board of Education, that there was not an organic connection between the common school and the higher educational institutions of the country; and when he took the direction of Antioch College it was not only its unsectarian promises, and the facility it was to afford for the equal education of women, but the hope to bridge over this gulf, and interest the learned professors of universities in the elementary education of the people, that attracted him. He wished to prepare the candidates for college study in his own way, and most of the applicants to that institution were resolved into a preparatory school. This preparatory school comprised men and women of all ages, from men who had been settled in the ministry down to children of twelve years of age. Mr. Mann felt, as Froebel had felt in his first school, that the defects of home education were at the root of all later evil with children, and that this evil could only be met by the superior education of women, for it is the mothers who give the first education. Children were sent to him who were unmanageable at home, and he sometimes had to resort to heroic measures to eliminate bad sheep from his flock. He did it tenderly, circumspectly but efficiently, by various measures suited to the circumstances, on the principle that the flock must not be contaminated. Sometimes he won them, and his patience was inexhaustible. Sometimes he showed them to themselves, and they came to him as to a father, that he might help them against themselves where they had been too far corrupted to do the work unaided. He saved many from the demoniac influence of the " vile weed," helping them *every day* to hold their resolution till they could pronounce themselves safe, and he enlisted public opinion in the college in favor of temperance. By his wit, by his tenderness, by his power to elicit self-respect, he restored to manhood and womanhood the frivolous votaries of self-indulgence, and enlisted the aid of his best pupils in the redemption of others. Public opinion gradually took the right side, and the members of his institution became in great measure the superior men of the community, protecting it instead of its being obliged to protect itself against them, as in most college communities. His dying words were to young men with whose souls he was dealing. The work done at Antioch College is fully known only to the subjects of it. It was his principle that a bad man should not be helped in his iniquity by the prestige of high education, which, if not used aright, only adds power to evil, and he refused to give a diploma except to those who deserved it morally as well as intellectually. The labors and perplexities of his position, which was one persecuted by bigots, shortened his life. He died because others did not do their duty, and in the full possession of the glorious fruition of his powers.

On Commencement day of that year his Baccalaureate was finished but an hour before it was delivered. He had not time even to read it over, but his giant will carried him through the fatigues of the day and evening,—twelve hours of unremitting strain. It was the last day that he could stand upon his feet, but the next day, instead of being left to sleep and rest, an important committee meeting was pending which lasted two days longer. A burning fever raged in his veins, and sleep was no more for him in this world. At last a flash of lightning pain passed over him which he was sure had disorganized his very substance. It was too true. But his brain continued preternaturally active for two days, and when the last hours were inevitably at hand he called for a student who had given him much anxiety, and uttered inspired words to him and to others who crowded around his death-bed. Could such a man die? Those who looked upon his face after his spirit had passed from it saw that what is called death was only more life.

THE STUDY OF LATIN IN COLLEGIATE EDUCATION.

BY PROF. FRANCIS W. KELSEY.

By common consent the study of Latin forms an essential part of higher education. In the classical courses of most American colleges it takes up from one-eighth to one sixth of the student's whole time, while in many foreign institutions of learning the percentage is still larger. Laying aside, for the present, the question whether or not so much attention ought to be given to a dead language, it may be well to consider in what way the time actually devoted to Latin in college may be employed so as to yield the most benefit to the student.

The average candidate for the freshman class has read somewhat in several of the less difficult of the Latin authors, and is supposed to be well-grounded in the grammar. Thus far, however, his work has been largely memorizing. He has learned, by rote, declensions, paradigms, and rules of syntax much as a parrot learns to say "Poor Poll." He has struggled with a strange vocabulary and idiom. He has toiled over Cicero and Virgil with grammar and dictionary, too often, it is to be feared, losing the thought in searching out the construction. Yet this preparatory training, if properly conducted, has been of inestimable value. It has developed the power of concentration. It has not only strengthened the memory, but also brought into exercise the faculty of judgment. Its main outcome has been mental discipline,—that first requisite to all intellectual progress. But, obviously, any amount of such training will not transform a crude, listless youth into a firm, roundly cultured and useful man. The college training must be broader, higher, nobler in scope and aim. It will be concerned less with memory, more with judgment; not less with accumulating facts, but more with developing the power to make use of facts; it will impart truth in systems rather than in fragments; above all, it will ever keep in view the growth of high, manly character. In any such course of education the Latin language and literature,—rightly treated,—become a means of training second to no other in value and efficiency.

The study of Latin is of practical value in the training that it gives in right thinking or scientific method. This is often overlooked; but where such result does not follow, the fault lies not in the subject, but in the teaching. Latin grammar ought not to be looked upon as a jumble of arbitrary forms and rules, a hodge-podge of roots, stems, inflections, and constructions, to be memorized without asking why or wherefore. It is rather a logical system, to be studied first in its parts, then as a symmetrical whole. Language is but the expression of thought; the Latin language is the outcome and embodiment of the Latin thinking. The rules of Latin grammar, therefore, are not arbitrary, but are founded upon the laws of thought and utterance. There is, then, a science of Latin grammar, which is concerned with the laws underlying the forms and relations of Latin speech. The art of Latin,—that is, a practical acquaintance with its forms and usages,—has been acquired before entering college; the first step in the college Latin course should be to ground these seemingly arbitrary formulas in their underlying principles. In this way the student will gain a deep and lasting knowledge of the language. He will proceed from facts to laws, from laws again to other facts. The method is the same as that employed in investigating and presenting the moral and physical sciences,—that of right thinking everywhere.

But the Latin language is something more than a logical system; it is an historical organism. With the Roman race it grew, flourished and declined. It should be studied not merely as an instrument of the Latin thinking, but as a growth, a development. Its relations to other languages should be examined; the influences that have wrought changes in its form and structure should be considered, their operations traced out. Such investigations, requiring at the same time accuracy and breadth of view in order to prosecute them, are no mean preparation for solving many a problem in real life.

In all this special training in Latin, however, it must not be forgotten, that the student is gaining an insight into the nature and office of language in general. The knowledge of language as an instrument of thought is a special aim of linguistic study; its importance can hardly be overestimated. Thought and language are ever acting and reacting upon each other. To understand their proper relation is a necessity, if one would guard against errors in thinking as well as in speaking. No other language presents to English-speaking students so many advantages as the Latin for linguistic training. For this purpose a language ought to be chosen whose structure is different from that of our own, which embodies a widely different thought and culture, whose literature is worthy the toil to gain access to it. The modern languages are much like our own in formation; their literatures all breathe the spirit of the modern life. Of the ancient languages, Latin merits particular attention, because of its direct utility in learning the modern continental tongues, as well as the aid that it gives in understanding the English. Novels are, in a measure, self-interpreting. To him who knows much they have deep significance; to him who knows little they mean little. Our own vocabulary is derived so largely from the Latin, both directly and through the French, that he to whom that language is a sealed book will seek in vain to fathom the depths of English speech.

If the study of Latin went no further than this, if it were only a means of disciplining and training the mind in correct thinking and speaking, it would be worthy of an important place in higher education. But all this is only preliminary to something higher. Thus far the student has taken up the language of the Romans mainly as a system of thought-expression; he is now prepared to study the Romans themselves. The Roman speech is only a gateway to the Roman mind; the Roman mind, through the products it bequeathed to posterity, exerts to-day a potent influence over the civilized world. For a thousand years, Rome wielded a temporal sceptre; ever since that fell from her hands, she has ruled men through the agencies of Church and Law. Without a knowledge of her influence, mediæval and much of modern history are a vagueless labyrinth, without a thread to guide the explorer. What a vitality in the Roman civilization thus to control the destinies of men! Yet human experiences are ever repeating themselves, The Roman life worked out many a principle, revealed many a living truth, of which we to-day may make practical application. The Latin writings, then, ought to be read not as mere grammatical agencies, but as products of the Roman mind. Every page of Latin that comes down to us has been preserved as by a miracle. It has escaped destruction,—why? Because it contained a thought; because it crystallized in fitting words some longing of the soul that all men feel, or some truth that is ever fresh, or some deed of old that even to-day inspires to action. The translating of authors in the class-room is comparatively valueless unless every thought is interpreted in its full import and expressed in proper English.

But the world for centuries has looked upon the Latin writings as masterpieces, as works of art, models for all time. Ought they then to be studied merely piecemeal, sentence by sentence? Much the rather should they be treated as works of artistic construction. The speeches of Livy, the odes of Horace, the orations and philosophical writings of Cicero embody the highest art. Their symmetry and beauty can only be grasped and appreciated by study of the organic ideas, by outlines of artistic form and of argument. The Latin writings are thus no longer dead; there is breathed into them a living soul. They speak to us across the abysses of the past with ever fresh lessons in the true, the beautiful, the noble. Through contact with them the soul is quickened, the mind and heart receive a culture deep and lasting.

In the time allotted to Latin in the college course, few and short selections only from the literature can be read. While, therefore, each author taken up must receive a proper amount of attention, there should be a survey of the literature as a whole,—an account of its development, its peculiar features, its influence upon the thinking and acting of mankind. Long lists of authors are here not all-important, Rather, what were the fundamental ideas of the Roman life,—what were the chords of that wondrous lyre from which the Roman bards drew forth strains of undying music? What did the Roman think of nature, of existence, of death, of the hereafter? How happened it that his thoughts were woven into mediæval and modern life, and fall to-day from the lips of men who know not whence they came? The study of the literature prepares the way for the study of Roman philosophy. Here, again, the time were well spent not in giving biographical sketches of the few who were eminent in philosophy among the Romans, but in asking how the learned interpreted the impulses of the soul and the world about them; what were their theories of the causes of things, their ideas of duty, their rules of life; and how their teachings wrought upon the lives of men in their own and the following ages.

The highest product of the Roman mind, however, must be sought not in Letters, but in Law. For the former Rome was largely indebted to Greece; the latter was the outgrowth of tendencies and conditions peculiar to herself. The Roman was by nature practical, constructive,—an organizer. He destroyed only to rebuild. Fragment by fragment the ancient world fell under his power; he reduced it to political unity. But in this strange motley of races, tongues, and peoples there was needed a firmer bond than individual will, a more lasting tie than military supremacy. There was needed a body of principles to adjust the relations of men to one another, which should be founded in natural rights and thus adapted to all. The magistrates sent out to administer justice in the subject States gathered up the laws which they found common to all peoples, and which appealed to the sense of right. The jurists, under the influence of the Stoic philosophy, enlarged upon these, and sought to ground their legal opinions in the essential elements of man's nature, and to reduce the whole body of law to clear and systematic form. Finally Christianity breathed into it the gentle spirit of the Golden Rule. In course of centuries there was thus developed the Roman law, in its last and most perfect form "a universal system of human rights founded upon the principles of natural justice." It is to-day the common law of well-nigh all Europe except England and Turkey, and even upon the laws of those countries it has exerted no small influence. While the collegiate Latin course has not room for a comprehensive study of the Roman law, some account of its growth, character, and influence ought to be presented. As a branch of study it has peculiar interest and value from the insight it gives into the science of human rights, and its consequent bearing on manifold questions of practical life.

The throbbing life of to-day demands from our colleges something besides learning and culture. It cares not for pedants steeped in useless lore. It calls for true men, who are earnest and practical, who know something of the problems of real life and are fitted to grapple with them. Duties and responsibilities press upon the educated man now as never before. Complex social and political relations present everywhere questions that he must answer, and bring crises where he must lead in action, or take rank with his inferiors. The study of Latin is only a means to an end. Unless it aids the fitting for real life in something besides discipline and culture of mind, unless it adds to these, knowledge of practical value and at the same time aids in the development of true manhood, it partially fails as a means of education. The question should be ever upon the lips, What useful lessons are to be drawn from this? Especially should Roman history be made to throw light on the questions of the day. Early in the course it ought to be taken up, not as a mere compilation of facts, nor as a poem of brilliant deeds and scenes, but as a working-out of the principles of social and political organizations, of human progress. The land question that agitates England and Ireland,—was it not for centuries the great underlying question in Roman politics? But lack of space forbids further illustration.

The collegiate Latin course ought to give a practical mastery of the language, and at the same time to present the full significance of the Roman civilization in all its phases. It will thus fit for real life, in a narrower sense, by training in right thinking and in imparting practical knowledge. But it will also strengthen the character by implanting those principles of life and action which are eternal, and as applicable now as two thousand years ago; by revealing the errors of the past, and by instilling an appreciation of the true, the beautiful, and the noble wherever found. As an eminent writer has said, "We would have men explore antiquity, not to bury themselves in its dust, but to learn its spirit, and so to commune with its superior minds as to accumulate on the present age the influence of whatever was great and wise in former times."

THE DELSARTE PHILOSOPHY OF EXPRESSION.

BY MOSES TRUE BROWN, BOSTON.

One day, more years now than I care to be accurate about, my teacher, William Russell, the elocutionist (known to many as the elder Russell), opened before my eyes a rare old volume, disclosing a full-page picture of an orator, standing, to all appearance, inside a globe, and pointing with extended arm toward some letters (*r.*, *obl.*, *u.*, right, oblique, upward) inscribed upon the inner periphery of the projected globe,

The teacher said: "This is 'Austin's Chironomia,' and here you will find the best treatment extant of the subject of gesture." I attached little meaning to the picture then, and I have since found reason to believe that neither my eminent teacher nor the author of the rare volume found any deeper significance in that pictured globe, inside which stood the orator as in a cage, than a convenient way of teaching the technique of the hand and arm in gesture.

Some years later, I was reading in an idle mood Victor Hugo's *Toilers of the Sea*, when a significant sentence of the great French writer flashed a correspondence into my mind that had never occurred to me. The sentence read:

> "Man stands on one globe and bears another upon his shoulders."

Are all gestures, I reflected, rooted in correspondences between this material appearance, our objective sphere, and our subjective relations to this appearance?

Later on I read from some manuscript pages of the great teacher of expression, Delsarte, that had somehow come into the possession of Prof. Lewis B. Munroe, of Boston, an analysis of the human face. I may be permitted, perhaps, to present a few sentences that impressed me:

1. It is through the eye that we inhabit space. We gravitate to the earth through the feet; toward persons through the torso; to the universe through the eye.

2. There are three planes of vision: The plane of the superior; the plane of equality; and the plane of the inferior. They are, as it were, zones of our visible hemisphere. Each zone is most significant in expression. Man alone surveys the three zones. The animal, bound by

instinct, and with no conscious center, takes no note of the plane of the superior. Hence this profound law of gesture written in organisms. *Animal radiations are downward. Human radiations are upward and outward.*

3. If an idea leads you, the eye moves upward; as you gain the idea, the eye tends downward.

4. The phenomena of the imagination are in the spaces of the imagination.

5. The line of the horizon bounds the zone of the positive and negative emotions.

The zone of the positive extends from this line through ninety degrees to the zenith.

The zone of the negative, from this line, through ninety degrees, to the nadir.

6. Thus, too, the hemisphere from zenith to nadir, *which we face, is positive in significance.* The hemisphere at our back *is negative.*

7. And now note: The angles formed by the projected arm and torso have *absolute* significance in gesture. Ascending angles mark degrees of certainty or affirmation; and descending angles mark degrees of doubt or negation.

So the Abbé Delaumosne, pupil of Delsarte, wrote, in fine appreciation of the inner significance of these laws, these rare sentences: "Exaltation uses the gestures of a circle, making lines higher and broader as the object is more exalted. For God there is no circle. There can be none. Our concept outlines a portion of an immense circle, of which we can touch but a single point. This point, upon the inner periphery, we touch with a gesture of the eye, *It is impossible to finish the infinite sweep, and we retrace our steps.*"

Now, let us return to that sentence of Hugo, in quest of some of the correspondences which it suggests. "*Man stands upon one globe, and bears another upon his shoulders.*"

The globe upon which we stand is the world our senses have built for us. It is the objective world of the mental philosopher. A world of matter, made known to us through five special organs of sense, grouped in close proximity to the central mass of organic nerve-substance,—the brain.

Now, the testimony, continual and persistent, of these organs of sense would be absolutely final (did not we correct their averment through science) that we stand at the center of a limited and fixed plane, with an arch of crystal above and shutting down upon us.

We are at the center, and refer of necessity to all things as here or there, from the center where we stand. These sense-relations remain real with the savage and the civilized child, and in our every-day talk we revert to that early morn of the race when the sun and moon and stars were the greater and the lesser lights, made to rule the day and night of the greater earth, called out of chaos.

This is the globe upon which man stands. But the globe he bears upon his shoulders, what of that? It is a world inexorably bound to matter; and yet not of it. The world of concepts; images of the actual; pictures of the real; projected in some way that modern science is yet unable to explain, from the convoluted hemispheres of the brain, every picture being some kaleidoscope *re*-presentation of the forms, changes, and interactions of matter.

This is the world man bears upon his shoulders. So much for the suggested correspondences of Hugo's aphoristic sentence. And now the significance of Austin's caged orator becomes apparent, standing inside a globe with its lines of latitude and longitude (copied so faithfully, and so absurdly, by every writer on gesture since Austin, as a part of a wooden technique, calculated to disgust the student at the outset).

Read between the lines and this encircled sphere and its orator are illumined! Think a moment! Is it nothing that this dome of the sky has impressed its form upon you since childhood? Nothing that, standing on the edge of the ocean, you have always seen the white sails slide down the slope of the sea? Is there no significance in the blue curves of the distant mountains? None that when Michael Angelo would make visible human aspiration, he threw the dome of St. Peter's against the sky? None in this human sphere, the brain-case with its inclosed hemispheres of organic thought-substance?

Ah! I suspect it would be found, could we push inference, the eye of the mind, far enough, that all our gestures root themselves in the soil of correspondence and relation.

Reason as we may, our every-day talk and gesture betray us. We are, in vernacular, and at root, disciples of Ptolemy. With us the sun rises and sets, and the moon is larger than the day-star. The heavens are the heaved up, the hells the heaved down! Whatever may happen as scientific verity, the time will never come in art when the Hades of our New Version will not be real to the galleries at the theater; and the applause deafening, when the vociferous tragedian, armed with stage-sword and buckler, cries as he stabs: "Down, down to hell, and say I sent thee there!"

Thus ever and always exists for us a material or objective hemisphere. We are at its center; and refer to all objects as filling its spaces, or as outlined, against its periphery!

And now, note, by inexorable law and by a subtle chemistry hwhic we may never fathom, *the great knot of nerve-substance that fills the* *skull projects just such another hemisphere with periphery, spaces, and objects.*

And in all the universe, for us, there can be but two classes of objects: (1) Objects in real, and (2) objects in ideal. So, I think, it now appears that Hugo wrote a profound sentence when he wrote, "Man stands upon one globe and bears another on his shoulders," and that Austin's globe, with its lines of latitude and longitude, and with its caged orator inside, ceases to be meaningless; and that we may deduce from our consideration of the correspondence and relation existing between the inner and the outer, these three laws of gesture, as applied to objects filling the spaces of two worlds:

1. *All our lines of gesture must have reference to a projected hemisphere, either an objective or subjective apparition.*
2. *That the gestures that refer to objects, filling these spaces, will be identical.*
3. *That each line of gesture is a radial line, from the center where stands the speaker: and will have the three technical elements of direction, place, and extension.*

This is the rationale of Austin's technique of gesture as developed in "The Chironomia." Along this well-worn track have all our teachers of expression traveled until Delsarte led the advance into new and hitherto unexplored territory.

You may judge how incomplete and unsatisfactory must be my presentation of Delsarte, when I tell you that I have been able, before my classes, to cover by twelve carefully written lectures only the *general expressions of the organism.* I shall consider myself fortunate, therefore, if I may be able to touch a few points along the line of his discovery with a fair degree of clearness.

Delsarte accepted the deduction of his distinguished countryman, Cousin, that expression is the common measure of all the fine arts. So he sought for the laws of human expression in the manifestations which accompany this mysterious union of a material body and a spiritual essence. *The philosophy of expression,* he said, *is the philosophy of manifestation.*

He announced that his philosophy, in its broadest sense, covered the manifestations of the Infinite as revealed in the Universe, and in its restricted sense the manifestations of man as revealed through the body; so his definition of expression is a fine comment upon his philosophy. He says: "*Expression is the inner essence or soul, revealing itself through the outer substance or body.*" See with what lofty phrase he embodies his conception of all that is, of the Cosmos! There are two subsistences, of whose reality man is conscious, and whose recorded phenomena make the sum of that knowledge which we call *science*. These subsistences are (1) Matter, (2) Mind, Spirit, or Soul. Nothing exists or can exist, so far as we know or can think, that is not one or the other of these subsistences. They are the universal whole.

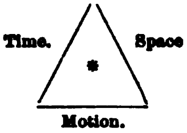
There are two grand words that we speak when we would cover with a name the aggregate of matter and the aggregate of soul. These words are the Universe, and God! Our concept of the Universe is of matter; fixed in form; occupying space; held by law. And our concept of God is of spirit; in forming soul; sustaining power; animating center; and pervading presence; of the Universe. All masses of matter are globes, both the infinitely great and the infinitely small, and are in never-ceasing motion.

Finally, Delsarte sums up his sublime conception in a profound law: The mysteries of God are revealed in space and time, through form and motion. They are concentrated in rhythm, which is vibration or swing of matter in space and time.[1]

Now, from the broad, the general, the universal, note how Delsarte descends to the restricted, the particular, the immediate; to man, the finite image and reflection of Cosmos; the most considerable inhabitant of our earth. Man, as we find him on this earth, is both matter and soul. He is the apex of developed matter, and the summit of all earthly manifestations of soul.

This union of matter and soul *in form* we recognize as the organism. And man thus organized is, from the necessity of his being, a creature of time, space, and motion. And as an organism he is, of necessity, limited or restricted, ***because he exists under certain fixed relations which he is powerless to change.***

And this brings us to Delsarte's "Trinity of Restriction." They might be illustrated by the successive lines of the triangle, thus:



TIME is an unavoidable condition of being. Once man was not on the earth as apparition or manifestation. Then he became. (It has past.) He is now. (It is present.) He will be...ah!

SPACE.—It holds all existences, small, great, greatest. It holds man; where can he go out of space?

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[1] How inevitably these far-reaching propositions of Delsarte recall Goethe's contemptuous query of those who would limit God and the Universe!

What were a God that only impinges externally the Universe, and turns the Cosmos, in a circle, upon his finger?

Motion is force expending itself. He is acted upon by matter in vibration. Vibration of the conscious self is feeling. I see, I hear, I taste, I smell, I feel, translated in terms of matter, mean I vibrate, I am set in motion!

And thus we find man on this earth conditioned as a union of matter and soul; limited by space and time, acted upon by, and reacting against, matter!

If, at this point, some one of my readers should be moved to exclaim that this is the thought of the transcendental school of psychology, of St. Hilaire, Oken, Goethe, of Swedenborg and of Lavater,—if he should think he detects the terminology of the mystic Hegel in Delsarte's Trinities, let him not be alarmed; for, whatever may have been Delsarte's metaphysics, he founded his science upon observed manifestations. He was as inexorable that every hypothesis be confronted by facts, as was Darwin, or is to-day Huxley, Spencer, or Tyndall. With him, as with them, his method was what is now known as "*the scientific method.*". First observation, then experiment and comparison, and finally *verified hypothesis formulated as law.*

And it is a literal truth that his note-books were filled with jottings of scores of keen observations, of how people about him acted, under the sway of varying excitements and passions.

Take, for example, such generalizations as these:

1. If I am called as confessor to the death-bed, and the dying man raises his hands to pray; *if the thumb falls inward,* I know that he is already struck by death!

2. I am out walking, and approach a friend, who is thinking deeply; he greets me with a smile; and after he has passed me, *he smiles on* until a new idea changes the current of his thoughts.

3. I go to church and hear the preacher shouting. His audience are asleep. *Let him be still: they will awake and listen.*

4. If I fold my arms, and at the same time ask a question, *my inquiry becomes a menace.*

5. The eye has but two expressions. It is (1) attentive. It looks *at.* It is (2) intentive. It looks *in.* Delsarte is in strict accord here with Shakespeare. The muscles of the face coördinate with the otherwise expressionless eye, and so, "*lend* the eye its terrible aspect," in extreme passion.

6. A man used to command, threatens by a gesture of the head from back, forward. If consciously weak, from forward, backward.

But to return to the point from which we digressed. We were about to consider Delsarte's Trinity of the Being. Analyzing the soul from the stand-point of manifestation. Delsarte taught *three states* *of the being, distinct in action or manifestation, but coexistent in consciousness.*

Every gesture, then, has its reason to be. It must disclose the side of the being from which it springs. Inner states become known through outer manifestations. Hence these words of Delsarte are full of meaning: *Strengthen the center and you will have freedom at the surface.* The body is the servant of the soul. More than that, no soul has ever been seen, or can be seen, separated from body. *In manifestation they are one.* To strengthen this unity, to develop harmony of the outer and inner, so that there be no cross-purposes, is manifestly man's work on this earth. Remember Goethe's words which he grandly applies to the Cosmos:

> "Naught is outer. Naught is inner;
> For the inner *is the outer.*"

All has birth from the inner vital unity; the manifold must arise from the one, not the one from the manifold. *In his essence, man reveals himself as threefold:*

1. He is Vital, Sensitive, Physical. Through this part of his nature he manifests the phenomena of animal or organic life.

2. He is Mental, Intellectual, Reflective. Throngh this part of his nature he manifests the phenomena of intelligence. He thinks, reflects, reasons.

3. He is Moral, Affectional, Spiritual. Through this part of his nature he manifests the phenomena of the affections and of conscience. He loves kith and kin, family, friends, and neighbors, his country, justice and right, his liberty, and God whom he worships.

These are three states of one being; three sides of the same prism; three currents of the same outflow; three rays of one beam of light. Neither state exists independent of the others. You may separate the terms, *you cannot separate the essence.* Nor can you know the essence except through its manifestations.

Now, the expression of these three states of the being are made through the organism, which is divided for this purpose into three divisions: (1) The Head; (2) The Torso; (3) The Limbs.

These are the agents of expression. These agents express the inner. Each agent has its normal language. Thus the head, by its form and gestures, translates *our mental states.* The torso, by its gestures, translates the *moral* side of the being; and the limbs show the activities of the *vital.*

To each of these divisions of the body Delsarte gave nine primary forms of gesture. So each agent has nine primary gestures. He further subdivides these divisions. Thus of the head there are the divisions, first of skull and face, and then of eye, nose, mouth, chin. So of the arm there are the divisions of arm and forearm, and subdivision of shoulder, elbow, and wrist as centres of motion, and further of the hand to show the language of its parts in gesture.

Delsarte formulated nine laws governing the manifestations of the organism. His statement of these laws is convincing. The law, as stated, carries its own comment. "This is true," says the delighted student; "I wonder I had not thought of it before!" And so, with wonderful clearness of statement, Delsarte has given thorough analysis of the organism and its parts. And this analysis, to the thoughtful student, will become a new philosophy, and *clothe with real living flesh* the dry bones of that wearisome skeleton of detail and technique, which we call our elocution.

In conclusion, let me congratulate our learned bodies of educators that François Delsarte has given the world what he was delighted to call "The Science of Expressive Man," and that, if there were no other merit in his work, he has set forth with such remarkable force and convincing clearness the great central truth, much in need of emphasis in these days of material advance, *of the immanence of the essence or soul in all manifestations*, whether of the infinitely great in the Universe, or the infinitely small in the atoms of a molecule.

WHAT, HOW, AND HOW BETTER?

BY MISS CARRIE B. SHARPE, FORT WAYNE, INDIANA.

In order to do any work well it is necessary to have a definite aim, to keep the desired end in view, and intelligently to direct every effort toward its attainment.

When an architect would plan a ship he must know upon what waters it is to sail, what burden it is to bear, and what speed it should make, and must understand how to plan a vessel which shall meet these requirements. Nor is it less important that the master-builder should understand the plan, and know how to direct each workman under him, so that when all is finished the conception of the architect shall have become a living reality. Just as truly should we who work with mind instead of matter have a definite aim, toward the accomplishment of which every energy should be bent. Have we such an aim?

That education is indispensable to the life of a Republic is an indisputable fact; that public schools are the best-known instruments for securing this education to the masses, is clearly proven by the liberal spirit which the citizens of the United States have shown toward taxation for this purpose. Though the second table of "The Law" is contained in the commandment, "Thou shalt love thy neighbor as thyself," no one supposes this to be the reason the rich provide for the education of the poor in these public schools; but rather is it because universal suffrage is based upon intelligent integrity, and the only hope of the continuance of the government, with its protection of life and property, lies in securing this intelligence.

So far all agree, but who can tell what should be the character and extent of the education the government should provide, and what should be the results by which we may measure our work and judge of its worth? Can the politician who grows eloquent over the public schools as the "corner-stone of our Republic," or the legislators and the "hope of our country," by whose action they are maintained, tell what is their proper place among American institutions? Have the educators, who are the *architects*, or the teachers, who are the *workmen*, a clearly-defined aim toward the accomplishment of which all their work is directed?

One class calls the school a failure, because in spite of the thousands of school-houses scattered broadcast throughout the land there is so large a percentage of illiteracy; and another class, the name of whose leader is familiar to all educators, calls them a failure because crime and vice are not put away from our midst. Others teach that the public schools have to do with the intellectual only; that the study of mathematics and literature, science and art should be pushed as far as possible, but that it is no part of their province to teach the child his duty to God or to his fellow-man. Truthfulness, honesty, patriotism, obedience to law, self-respect, and respect to others are expected to grow spontaneously, or be cultivated elsewhere. And others still claim that only the merest rudiments of an education shall be given to the masses of the people. "Education," say they, "is depriving us of American laborers, and compelling us to import all our artizans, while American youths become petty politicians or second rate professional men."

He who holds the public schools responsible for the illiteracy and crime which abound has failed to remember the thousands of immigrants of every nationality who are annually landing upon our shores, many of whom are from the lowest grades of society; as well as the fact that but fifty per cent. of the children of the United States are in attendance upon these public schools. Two-thirds of the other fifty per cent. are being educated in schools opposed to republican institutions, and the remainder getting their education upon the streets of our cities.

Surely, under these circumstances, the public schools should not be held responsible for the continuance of either crime or illiteracy. On the other hand, it is true that, since ours is a Christian country, acknowledging God as the author of our prosperity and the giver of all the blessings we enjoy, our children should be taught to reverence Him and honor His law. How inconsistent to proclaim upon our coin, "In God we trust," and forbid our children to be taught their dependence upon Him!

Since our government makes the school-age extend over a period of fifteen years (longer than that of any other country in the world), surely those who would limit the work to teaching the masses to read and write must be mistaken.

On the one hand, far too much is demanded; on the other, far too little. Somewhere between these extremes lies the work of the public schools. Since the State undertakes the process of education and provides for the support of public schools, the primary object of these schools must be to make citizens,—citizens of our American Republic in this Nineteenth Century.

Our "Ship of State" is built, but she is still taking on cargo, which must be properly stowed to preserve her equilibrium; and the ocean over which she sails is an unexplored one, full of unexpected rocks, and subject to unlooked for storms; and "the children of to-day," who "will be the architects of our country's destiny in 1900," must be molded and trained into citizens, possessing powers of mind and conscience sufficient to guide this "Union strong and great," so that,—

> "In spite of rock and tempest's roar,
> In spite of false lights on the shore,"—

her beauty and efficiency shall be retained.

The history of the world shows no such great movement of population as the one now in progress to this country, except that which flowed into the Roman Empire from the north, causing its decay and death. It is estimated that at the present rate of immigration, in thirty years these foreigners, with their children, will equal our entire population. A large number of them will go to the hitherto unpeopled regions of the *far West*, to build cities and create industries for themselves; but many of them will remain in our older cities, to be used by unprincipled politicians in controlling the ballot-box, and all will bring with them ideas of life wholly at variance with republican institutions.

Our only hope of maintaining our distinctive nationality lies in assimilating the better class of those foreigners to American life, and controlling the vicious classes. Who shall do this great work? Our chief dependence must be upon the small army of school-children,—small in view of the great forces against which they must contend; yet, if they are men and women of intelligence and integrity, they shall win the battle.

The centralization of capital, with the opposition to it from trades-unions and communists, presents a difficulty which these children must have wisdom to adjust properly, or upon this rock our Government will be wrecked. The lack of American laborers is due to the fact, not that our schools unfit its pupils for labor, but that our country is in that state of transition which makes it difficult for her children to become expert artizans. The day of apprentices has passed, and skilled labor is demanded, while, as yet, no sufficient means have been provided by which these children can acquire this skill. Schools of manual labor have been proposed as a remedy, but to establish such schools, and make them effective, will require great wisdom and tact.

Ours is an age of wonderful development in every branch of art and science; new industries are opening and new resources developing day by day; old things are passing away, and all things are becoming new with almost panoramic swiftness. No wonder that it is difficult for the school-system to keep pace with the needs of the people. Looking back over the radical changes that have been wrought in American life and thought since the present century was ushered in, and forward to those that are likely to take place before its close, we are convinced that, notwithstanding these many changes, the great need of our country is now, as it ever has been, intelligent, honest, patriotic, law-abiding, God-fearing men and women, and that our work is to do our utmost to help the school-children to become such citizens.

How are we doing this work? We have an admirable system of public instruction, so perfect in its mechanical workings, and so generously supported, that, by means of it, we have been able to plant school-houses almost within sight of every farm-house in the land, and to give to the teachers in them the latest and most approved methods; but, alas! the results are not satisfactory.

Looking over an educational journal, a short time since, I noticed the following from a city superintendent: "The whole country is in a fever of hot discussion by zealous school-men over little points of difference in methods of instruction and discipline, none of them of the slightest importance to the boy who isn't in school," and that is fifty per cent. of the whole; for, while our government makes abundant provision for the education of her children, she does not compel them to avail themselves of these privileges. In very few of the States have the school authorities any legal right to compel attendance, or to enforce the obedience of those who do attend. This is one reason why so small a percentage of those who enter school remain to complete the course. Parents of bad children do not control them, the school authorities dare not; and so, for the sake of peace in school, and the lack of power to keep peace while they are there, these vicious children are allowed to leave school and make the hoodlums of our western cities. Their loss is a gain to the school, but a real loss to the government, as these are the very children whom the government must take care of in its prisons and asylums, if it does not retain them in its schools. The article above referred to closes with, "First get the children into school, and then you can work up the best way to handle them." True, but not by discussing "methods of instruction and discipline." These discussions and their outgrowth have built up barriers which prevent the attainment of the very end sought. The object of them all is to make education thorough and practical, and the result is exactly opposite.

A clipping from one of these late discussions says: "The attainment of real mental power, and not high-class standing, should be the incentive to study;" but this is an utter impossibility in most of our city schools, because there is neither time nor opportunity on the part of the pupil for real independent study, and because both teacher and pupils are bound by a system of marking, which, in spite of all efforts to the contrary, is the controlling force in the school-room. So many are the recitations and exercises which must be put into each day's work, that it requires sore puzzling of brains on the part of the teacher to make a programme which shall include them all, even though the shortest time possible be given to each subject. On the other hand, the amount of ground to be "gone over" in each is so extensive that it becomes necessary to put more in each day's lesson than the *average* child is able to digest, leaving the dull pupil no chance whatever; and since the teacher's reputation and the child's promotion depend upon the marks obtained from the recitations, these marks become the object sought. Why has this condition of things been permitted to grow up and remain? Simply because the school-men, who discuss these questions, decide what ought to be done, and draw plans for doing it, in their offices, with no practical experience in the school-room; and those who do the work have no voice in the *what* or *how much* they shall teach, and very little in the *how* they shall teach it. In the smaller towns the gulf between the controlling power and the working-force is not as wide as in large cities, and for this reason, while they are deprived of many of the advantages of their city cousins, they are able to make stronger scholars.

The city superintendent sits in his office and very carefully arranges his "course of study," making it cover all the subjects educators have deemed necessary to fit the children for citizenship. From the variety of methods for presenting these subjects he selects the most approved. Perhaps the text-book is banished from the teacher's desk, that she may not be a hearer of lessons only; and possibly all chairs are discarded from the teacher's platform, that she may have no temptation to be lazy. That the superintendent may test the thoroughness of the work, he orders frequent examinations, by means of which, together with the carefully-kept records of the daily recitations, he is able (?) to view the results of all this labor. If he examines the manuscripts of the pupils, he is usually disgusted, and blames the teacher for the failure, or goes over his methods again as they are mapped out on paper before him to discover, if possible, what is the cause of these poor results; and then at the summer conventions he will discuss these methods with other superintendents, and these discussions will result in new methods for the ensuing year. In true Emersonian style they try, beginning at one end one year, at the other the next, and in the middle the next, to see which works best; but, alas! one is as truly a failure as the other.

The superintendent is faithful in his work and the teacher in hers; and if this earnest seeker after truth had gone into one of his school-buildings, last winter, and watched the actual work done in the various grades for several successive weeks, he would have discovered that the remedy is not so much in better methods as in giving the teachers and pupils an opportunity to cultivate "mental activity" and intellectual development. He would have discovered, much to his surprise, that the theory which looked so promising upon paper, and appeared so well calculated to stimulate real mental growth, in actual practice absolutely forbids such growth, because of circumstances surrounding it, which did not appear upon the paper. The old method of committing the words of a text-book has been superseded by a new method of cramming a mixed diet into the mind of the child by the teacher, allowing it no time to digest; hence, when examination-questions, based upon what they should know if the theory had been realized in the practice, are put to the children, they drag up from this undigested mixture odds and ends of everything bearing the faintest resemblance to the words of the question, and the ridiculous answers so frequently printed in educational journals are the result. Poor children! they are not to blame, neither are the teachers; but the fault lies in this divorce of theory and practice.

Now, how can we do this work better? The first two difficulties mentioned must be mended by legislation, but educators must be the power to move the legislators. In some way the government must compel the attendance of these children who are not in school, and must give the school authorities power to compel obedience. This does not necessarily imply corporal punishment, but law is necessary in every community, and certainly so in a community of immature minds who are in a process of training for law-abiding citizens. But law, without power to enforce it, is worse than no law; and if the school-children discover that there is no power in the authorities over them to compel obedience, why should they not feel that they may break over the restraints of law everywhere? To obey law and have respect to those in authority should be taught in every schoolhouse in our country, and no one should be in authority over the children who is not worthy of this respect. While the public schools belong to the State, they should be kept out of the reach of politicians, and all school-officers and teachers should be appointed because of fitness for their work, and for no other reason; and when such teachers are secured, they should be retained during a period of good behavior, instead of being kept in a state of continual suspense as to whether they will be retained from year to year.

Next comes the necessity of a closer connection between controlling power and working force. In cities large enough to require several buildings, thus preventing the superintendent's giving his personal attention to the practical work, there should be some means devised by which the real condition and necessity of each school-room can be laid before those who decide what work shall be done and who shall do it. The principals of these various buildings would seem to be the proper persons to form this connecting link; for, standing between the superintendent, whose point of observation is at too great an eminence to allow him to see way down to the little ones in the baby-room, and the teacher whose horizon is shut in by the narrow limits of one grade, they watch the progress from day to day and year to year, and should be able to judge as to the character and quantity of the work each grade can do; but unfortunately, in most schools, while they are held responsible for the work done under their supervision, they are allowed no voice in deciding these questions.

The attention of educators should turn toward the revision of the course of study with the idea, not of seeing how much can be added to it, but how much can be spared from it, and how that which is retained can be best adapted to cultivate real mental power, and put the child in the way of obtaining information for himself. Arithmetic, which has so long reigned supreme in the school-room, should not be dethroned, but should undergo a radical change as to the *when* and the *how much?* Its fundamental principles, without which no man can be successful in business, should be taught during the first five years of school; for, at the close of the fifth year, but forty per cent. of those who entered school remain, and the sixty per cent. who have left have had no opportunity of learning even the rudiments of percentage, while their time has been spent in learning the science of arithmetic, or in solving curious puzzles in the combination of numbers, all useful as mental discipline, or as a preparation for higher mathematics; but even to those who remain to build upon the foundation so laboriously laid, it would be far better if these deep things were left until their minds were more mature.

Drawing and music are two of the innovations of the last decade which have proven themselves worthy to be retained, and, confined within proper limits, do a work for the children which nothing else can do; but the spelling-book, that old-time servant with those endless columns of words, never seen outside its covers, may well be banished from the six lower grades, at least while the spelling in all grades may be far better taught in connection with the reading-lessons; indeed if reading be exalted to its proper place, it is possible to dispense with all language-lessons, object-lessons, and science-lessons, and secure better results than with them. Since it is plainly impossible for the school to give the child all the information necessary to fit him for the duties of life; and since the mind, like the body, can grow and become strong only by exercise, it is time we stopped cramming children and weakening their intellectual powers by this process. Instead of trying to teach orally, or from a primary text-book, a smattering of every subject under the sun, let us adopt the infinitely better plan of putting into their hands the means of acquiring knowledge, after they go out from school, by teaching them *how* to use those efficient instruments of education which are accessible to all, in the abundance of good literature which our day affords, and the daily newspaper, which, after all, is the real educator of the masses. If, then, the children are taught to read, and a taste for good reading is cultivated, they have an "open sesame" to any of the various paths of knowledge which lie spread out before them. How can we do this? Not by confining our reading to the reading-book, which, nevertheless, must be retained for drill-work in learning to read, but something fresher and more enticing is necessary to cultivate a desire for reading. In the average city school at least two-thirds of the pupils have papers and magazines suited to their years, and nothing gives them greater pleasure than to be allowed to bring them to school for the teacher's use. If one or more be appointed each day to select a story and read it to the school, learning to read will not cease with the closing of the school-room doors, but there will be searching among the papers and story-books after they get home; and those children whose parents never thought of taking a paper for them will be so urgently entreated to do so that they will yield, and an educator will be admitted to the very heart of the family.

In the selection of the story to read in school the child will disclose his natural bent of mind, and a faithful teacher can do much toward directing it in a healthy channel, and will find many opportunities presented her for teaching wholesome lessons. Perhaps one child reads a story of some domestic animal; all the children are familiar with the animal and are anxious to talk about it, and a few moments spent in such conversation, under the teacher's careful control, may be made a more practical language-lesson than one from any "Language Book"; and if an opportunity be given, the next day perhaps, for the children to reproduce this story upon paper or slate, a writing-lesson, a spelling-lesson, and a composition-exercise will be the result.

Another day the story may be the flying of a kite or the ascension of a balloon, and a science-lesson follows; a science-lesson the children will remember, because their minds were prepared for it by the story. Now, the story may be of a kind and loving deed done by a child to the old, the infirm, or the unfortunate, or it may involve some principle, as truth, honesty, generosity, temperance, or moral courage, and the talk about the story may be made an effective lesson in morals. If the story be of some noble character, the children may be taught to see its beauty and desire to copy its virtues. With the many excellent books of travel, a map, and a mere outline text-book, geography may be taught far better than from a more elaborate text-book.

But how can the newspaper be used in school? Any live teacher who is interested in current news, and feels that teaching her pupils how to read a newspaper will be a real help to them, will find a way to use them, and the method is of the least consequence if the work is only done. A plan, tried with success in the intermediate grades of the school with which I am connected, was to take the first ten minutes after the devotional exercises to inquire what news the evening or morning papers had brought us; each child was encouraged to give his news-item. I placed on file in my office the daily paper of a neighboring city, that the local items might have no attraction. Permission was given the children to add to this file any papers they might think especially interesting and desire their companions to see. To this file they were allowed to come at certain times during the day, thus giving those who had no paper at home but the two-penny local an opportunity to see how much better was the news concerning the real work going on in the world than the petty gossip about their neighbors which fills those local papers. On Friday, at a suitable hour, there was a general discussion of the news of the week. In this way the pupils followed the commotions in foreign countries and the developments in our own. The doings of Congress were carefully watched and reported. One class in United States History, following the discussion concerning the Panama Canal, found the Monroe Doctrine a topic of interest; and in the Fitz-John Porter case, the Geneva Award bill, and the Rosecrans-Garfield letters, the civil war was brought down to their own times. They followed the President through his lingering illness and death, until all hearts went out in admiration of the great and good Garfield, and *From Canal Boy to President* was read by all who could get it. In the papers came Susan Coolidge's poem, "What made the people love him so?" which was a choice bit of poetry for them to commit, teaching the real secret of a noble life.

In following the "Jeannette" a geography class learned more of Siberia than they would have gained from a month's study of a text-book upon that country; and from the floods in the Mississippi Valley they learned of the nature of that river, and the difficulty the Government has in keeping it within bounds.

While the Anti-Chinese bill was pending they studied the character and customs of that people, and read all they could find in respect to their influence upon our country; from the discussion over the Anti-Polygamy bill they realized that our country has a dark stain still left upon her fair face which must be blotted out. No reference was made to party politics, and no one ever knew from these talks over the current history of our country to which party any one belonged; yet independent thought and opinion were fostered, thus laying a foundation for the intelligent casting of a ballot in the days to come.

From the death of Holland they learned of his life and writings, and were anxious to read his books. By the death of Longfellow a new interest was aroused in his poems, many of which had been used as reading-lessons in the early part of the year, and several choice quotations were committed by the pupils. But time will not permit me to tell you any more of the good things our news-lessons brought to us. At the close of the week the papers on file were slipped, and all items worth preserving for future reference were put away in boxes prepared for this purpose, and properly labeled, thus making a convenient library on the "topic of the times." The newspapers also brought us science-lessons week by week in the accounts of the new inventions and discoveries, and the practical shape in which the scientific principles involved were presented made them very attractive, and sent the pupils to text-books upon the various branches of science for fuller information. In this way our reference-library became very popular, and learning how to use dictionaries and encyclopedias, a whole mine was opened up to them. But the newspaper is not the panacea for every evil in the school system, and I am far from advising the dropping of everything else, and rushing headlong into newspaper reading. Such a course would turn a powerful ally into a dangerous enemy. Much poor scholarship is due to the lack of studious habits which has arisen from the prevalence of oral teaching. Strong men and women can never be made by smoothing the way for them too much. Having opened up this vast field of information, our next duty is to teach them to select from it that which is best adapted to their individual needs, or the necessities of the times; how to make it their own, and how to use it to a purpose. The mental activity and ability to concentrate thought upon the subject under consideration, necessary to the accomplishment of these objects, comes only by hard work. For this purpose the study-hour should be jealously guarded from interruption, and the child should be required to learn the lesson assigned him by his own unaided efforts. The perseverance in spite of difficulties, and the power to overcome obstacles thus acquired, will make these children successful in their own lives, and prepare them to be a strong wall of defence against any wave which may threaten our national safety.

After all this, however, our work will be a failure if we do not train their consciences to hate a lie and despise a fraud, for the God to whom we owe our greatness as a nation and our blessings as individuals is a God of righteousness, and will not look upon iniquity with any degree of allowance. We must teach the children to make *right* and not *seeming* policy the controlling motive of action; and since the teacher is the "loving epistle, known and read" by them all, in vain will be any attempt to inculcate, by precept, moral principle above that which appears in practice. It is, therefore, of the utmost importance that all teachers be persons of moral integrity, and no less important is it that all workers in the higher ranks be of like character; and that all work done in these schools be based upon truth and honesty, rather than upon political policy or personal advantage. Since, then, our work is to train up a race of men and women having sound bodies, clear judgments, wise heads, and enlightened consciences, we have a model after which to build, and, instead of rushing headlong after one enthusiast to-day and another to-morrow, let us carefully and intelligently direct every effort toward the accomplishment of this aim. Thus, and thus only, may we expect "that our sons may be as plants, grown up in their youth, and that our daughters may be as corner-stones, polished after the similitude of a palace."

FRIEDRICH FROEBEL.

BY ELIZABETH PORTER GOULD.

"To reach the unconscious harmony of nature with consciousness in the human sphere, is the goal which God has set for man." These words of Friedrich Froebel, in this the hundredth anniversary of his birth, are still the words of prophecy in which lie the best hopes of the human race. They are the fruit expressed in words of his great idea by which he has become known as one of the world's great educators, the idea of the necessity of working out a full harmonious union of man with nature, through a distinct knowledge of, and a wise care for the germ of intelligence as seen in earliest childhood.

Since he was more anxious to know the condition in which a being entered this world than the state in which he left it, he was a seer who saw clearly that the "child is father of the man." The interesting way in which he worked to guide the development of this germ by which it could become itself, and only itself, perfected, resulting in a method which as yet is known but to comparatively few, makes him one of the few really original men of modern times, or, perhaps, of any time. In that he saw in this germ the divine spark which distinguishes man from the beast, and is the seed of his immortality, he dared to assert the dignity of human nature, and worked accordingly. He reached the foundation of human life when he saw this spiritual unconsciousness awakening to conscious being to assert its prerogative of free choice. He made this knowledge a means of true progress when he urged the necessity of filling the very earliest play-hours of the child with wise, intelligent action. When he taught that the "senses are to be awakened as the organs of the mind, and not as the organs of mere sensuous pleasure or of mere desire, as in the animals," he showed an insight into that subtle relation of matter to mind which underlies that growth of character which ends in self-mastery. He insisted that a sympathetic study of the child in its earliest relations to the world around it, was necessary for the development of that originality which gives to each man his distinctive work and power in his chosen place.

He was confident that this need of a "correspondence between the instruction given and the inner stage of the soul's development and measure of power" would be supplied by the right application of his educational method,—that is to say, gradually, step by step. To a friend who was lamenting over its slow and imperfect advance in his own time, he said: "If three hundred years after my death my method of education shall be completely established, according to its its idea, I shall rejoice in heaven." Is not this the hope of one who lived and labored in the light of an eternity?

His power of vitalizing his original idea into daily action intensified his personality, and made him a worthy disciple of Him whose whole life was an outward expression of inward thought. While in their seclusion some of the best minds had been, and still were, pondering over the destiny of the infants' souls if they should leave their bodies, Froebel, like the renowned Pestalozzi before him, was working to cultivate the little soul-germs for true living here. Thus he was one of those wise ones who realize, before it is too late, that God's laws are the instruments for man's use, not for his vain speculations. Obedience to the known laws precedes the knowledge of the unknown. The laws known to a man guage the intelligence of his religion.

In his knowledge of the child-soul, Froebel showed the secret of One greater than he, when he *knew* that "Of such are the kingdom of heaven." This knowledge was the father of his action, and one cause of the simplicity and purity of his own being. His simple and full way of loving was clearly manifested during his last sickness. On one of these days the children brought him some flowers, and in childish joy he exclaimed: "I love flowers, men, children, God! I love everything!" In his conversations at this time he dwelt much upon the idea of truth in itself, and always closed by saying: "Remain true to God!" Often as he was seated at the open window, on fine summer mornings, enjoying to the full the beauties of nature, he would exclaim: "Pure, vigorous nature!" His full conception of this included a union of humanity to nature of which he never lost sight, either in his mental or spiritual vision. Perhaps it can be said that in him there was but one vision, since the sublime unity of his life made his soul and intellect one, thus illustrating a theory common to Carlyle, Emerson, and the great Teacher himself, that the great soul is the high, intuitive mind. The effect of his single-eyed loyalty to the unity of God, man, and nature, as he conceived it, made him capable of saying to his friend and follower, Middendorff, as his parting words: "I recognize the unity of my life throughout. Such a one has not been known for a long time. It has been able to work itself out only by rare circumstances. But it is one condition of fulfilling the demand of our time. If you go away now, stand there as I stand here, in the same inward unity."

This simple nature, clear in its transparency, was permitted to see much that is hidden from common eyes. As a man he was limited; but his limitations did not shut him out of the kingdom of heaven. He was more unselfish than learned; he was more loving than critical. He saw greater rewards in training children than in leading men.

Much of his ripest thought is foreshadowed in the best thought of to-day. He spoke for all time when he said: "The educator of man can only fulfill his task truly when he clearly recognizes the whole of the man and of mankind, and knows how to separate the universal, the eternal, in his being from the particular form that belongs to one time or person, or the casual." In his conception of the needs of man, his thought ever revolved around the eternal idea of Christianity,—"God in humanity; humanity from God." That explained for him the relation of man to God exhaustively for all times; and he declared that all education which was not founded upon it was "one-sided, defective, and fruitless." His penetrating eye saw through the rubbish of man's weakness and self-conceit to the inner shrine of its power and glory. In this loyal devotion to the manifested Christ as a simple revelation of God's perfected humanity, with the helps and hopes for man consequent upon it, he was superior to many a great one who has bitterly seen man's need but not his remedy. In a deep, subtle sense, Friedrich Froebel was incapable of denying his Lord. But in this loyalty to the revealed Christ, the "Divine Spirit in humanity, the human spirit from God," he was not blind to the power of "God in nature, nature from God, the history of creation;" but he sought a perfect harmony by unifying humanity with nature, thus "recognizing the tri-unity which makes up the result of this correction, or unifying, of opposites." This was his great idea, which, as he conceived it, was a stage of development destined to infuse the knowledge that "man and his being is one with nature, and to call upon spirit and nature to be reconciled by spiritualizing the nature of man." He knew that the workings of this infused knowledge would give vitality to the work of science. Emerson was cognizant of this truth when he said: "The motive of science was the extension of man on all sides into nature, till his hands should touch the stars, his eyes see through the earth, his ears understand the language of beast and bird, and the sense of the wind; and through his sympathy heaven and earth should talk with him." He also sympathized with Froebel when he said: "Stamens and spores, on which we lavish so many years, are not finalities; and man, when his powers unfold in order, will take nature along with him, and emit light into all her recesses." Indeed much of Froebel's thought, closely analyzed or intuitively seen, finds form in the life and teaching of Emerson,—one who, in spiritualizing himself, spiritualized nature; for, in a full sense, "in *Him* (not in matter) he lived and moved and had his being." This idea of spiritualizing matter rather than materializing spirit, this lifting up nature to the purity of an Emerson, rather than dragging down spirit to the demoralization of Nero, suggests much with reference to the prevention of crime, and of even the common bodily ailments. The sowing to the spirit reaps life everlasting; the sowing to the flesh, or matter, reaps corruption. The perfect obedience to the laws of Spirit,—God,—brings perfect harmony. The poet expressed this harmony from which arises the power to obey, when he said:

"So nigh is grandeur to our dust,
So near is God to man,
When duty whispers low, '*Thou must!*'
The youth replies, '*I can!*'"

The perfect harmony of body and spirit knows no ill-health; all sickness is sin, the effect of broken laws. It is possible that there is hidden in this thought of spiritualizing nature a principle which, as developed in the light of science and of experience, may explain the transfiguration, resurrection, and other manifestations of Christ as natural realities, rather than as miracles to be explained away as impossibilities or myths; for was there not in them the transcendent power of pure spirit over matter, or matter spiritualized?

To rest in this possibility waiting for more light, in the presence of such mysteries, is more becoming the finite mind than to rest in a suicidal unbelief. There are no words written telling of a greater loss than, "He did not many mighty works there, because of their unbelief."

In so far as Froebel saw in the workings of these laws the principle of evolution starting from a spiritual as well as from a physical basis, he was as true to a revealed religion as to science. Religion reveals, for this age, the dispensation of the Holy Spirit under which we live; science, the workings of nature. He worked for their harmony. He willingly opened his own soul to the light, and saw that the interpretations of the spirit, rather than of the letter of God's revelations, enlarged and prepared the mind for seeing, in the fullness of time, God's whole truth, which in itself, since limited by man's ignorance and self-conceit, could be revealed only in successive epochs. This idea verified for him the fact of the ever-growing knowledge hidden in the holy Scriptures, which promised that in different stages of development man should go on from faith to sight; therefore he saw the work of the ages to come preluded in the words of Jesus: "I cannot tell you all things now; but the Comforter will come who will lead you into all truth." Is not this the expression of the best spiritual thought of our own day?

Froebel had learned that the spirit of truth must change its form from age to age to adapt itself to the needs of the growing soul, which ever sees new revelations; but he remembered that it was the same spirit,—the spirit of a Father who never forsakes His children. He felt the necessity of the world's losing none of the old forms of truth, as historical landmarks of man's progress, in the necessary acceptance of the new ones which from age to age developed themselves. He thus showed the spirit of a seer, who links the ages with an honest faith rather than with a narrow prudence,—the one enlarges, the other dwarfs. In that he considered every revelation a germ which human labor was to develop, he recognized the transcendent privilege given to man of being a laborer with God. He realized the power of man's free will when he said that the knowledge of truth could not be bestowed upon man, "but must be won by strivings of the soul itself." He taught that the power of spiritual discernment rested in a willing obedience to God's laws. These laws obeyed, link the chain of God's will and make the prayer, "Thy will be done," active rather than passive. There is no greater lesson to be learned than this. As he believed that every thought of God must have its full realization, so he felt that the thought of humanity, as realized in the God-man, would find its universal expression upon the earth; otherwise the precept to imitate Christ, to attain to human perfection, would fail of its force, or, as he expressed it, "Humanity, as we understand the idea, belongs to the earth, and must, therefore, rise to its attainable perfection within the limits which are affixed to it as an organism."

The high-born nature of Froebel asserted itself in his choosing to live in the atmosphere of faith with its insight, rather than in that of controversy; hence he saw the essentials, and was not weighed down by the petty, shifting details. On being asked, at one time, if he could persuade the theologians of some of his thought, he said: "I do not dispute with them. I think I am as really orthodox as themselves. I know Christ, and He knows me; that is enough for me. I work that Christianity may become realized."

In the midst of the most depressing difficulties, when soverign power closed his schools and learned ones called him a fool, he was convinced that the principles of his method would be felt more and more as the idea of the dignity of human nature found its proper place. He lived near to the heart of God; and only such souls belong to the nobility. Their inheritance is incorruptible. Friedrich Froebel hungered for unity, and found it in God. From unity, God, he learned that "everything goes out unconscious to return back conscious." He also learned that "in consciousness ripens personality (relative in man, absolute in God), which is eternal in its particularity and peculiarity,—one note in the great harmony of the universe, never passing away, continuing into infinity." This knowledge, that a divine spark, in its coming from God, is gradually awakened to a distinct personal consciousness in its own little world of animal matter, subject to its earthy tendencies, led him to realize the great responsibility of its early training. He knew the value of the pliable clay. On this union of mind and matter, which thus made a personality in the human condition, he saw God's sovereignty in the workings of His laws, as well as man's gift of free will. The antagonism between them was a necessary means of gaining knowlledge and strength. Whether mind or matter gained the mastery in the first stages of human experience, was to him the question on which the hopes of future harmony depended; therefore he worked in the belief that a harmonious union of mind and matter was the great preventive of evil. Had there been more Froebels, how much less misery! He knew that spirit could find individual personal being,—from God to God,—only by passing through the elements of time. The way to the Father was through bearing the world's crosses. The kind of personality gained in the warfare gauged the depth of the eternal life.

When he called death the "enlargement of life," the throwing off of all that hindered the soul's progress, he put a just value upon the use of the changeable. The enlarged life was the so-called future life, which words were a "mere phrase." In one of his last talks, he said: "We shall know at some time that the present life and the other life lie in the same universe, in which there is no real separation, and in which everywhere there exists the closest, most unbroken connection." In that he could see the light of the spiritual atmosphere through the heavy clouds of sin, he lived as "seeing Him who is invisible." Since his knowledge of earth's tragedies and limitations did not blind him to a Father's love or a heaven's reality, nor his failure to see fruit smother his ambition to sow seed, his sight and endurance were fraught with everlasting rewards.

It is to be hoped that this little study of Friedrich Froebel may create a more general interest in his method of practical working in the cause of education. While, in its efficient progress in the course of time, some of its minor details may be changed or destroyed, its principles will remain the same. Even the name, Kindergarten,—a garden for children,—through which his system introduces itself, should awaken an interest in those who see the future growing out of the present. If all our mothers possessed his secret, each home would be a kindergarten producing sturdy plants for the future. But the impracticability of accomplishing this does not exclude the forming of schools under wise management all over the land. The last few years have seen an awakening in this direction which even now shows its influence upon the children as well as upon the young women who are engaged in the work. The effects of it are intellectual and refining. In that Froebel firmly believed and taught that woman by nature was destined to become the great educator of the world, he preluded the movement for her higher education. In so for as this work imbibes the subtle, deep-working principles of his method, it will be larger in its aims and more effective in its results. Since he felt that the destiny of nations rested more in the hands of women,—the mothers and teachers,—than in the hands of self-seeking, temporal-working innovators, he dignified motherhood and put a just value upon the teacher.

The future years will reveal, without doubt, a clearer knowledge and a larger appreciation of Friedrich Froebel and his original work to a greater number of intelligent people; and in 1982 the world will be glad to more generally celebrate the two hundredth anniversary of his birth.

THE INDUSTRIAL HOME SCHOOL OF THE DISTRICT OF COLUMBIA.

BY JOHN HITZ.

"All children within this province of the age of twelve years shall be taught some useful trade or skill, to the end that none may be idle, but the poor may work to live, and the rich, if they become poor, may not want." So reads Sec. 28 of the laws of Pennsylvania, issued by William Penn, and agreed upon in England A. D. 1682, just two hundred years ago; and so thought the managers of the Washington Newsboys' Home Association, who realized that the scope of the institution they had founded during a war (April, 1863) was inadequate to meet the pressing demands made upon it under a changed order of things. They therefore wisely decided to abandon their special and more limited field of activity, and reorganized in the year 1867 under the name and title of "The Industrial Home School of the District of Columbia," for labor more comprehensive and uses more urgent under the new condition of affairs.

"*Industry the antidote of pauperism,*" was the aptly chosen motto of the *Industrial Advocate*, a publication issued by the reorganized Association. In the first number of this journal the aims of the organization are concisely stated in the following article of the constitution:

> ARTICLE 2. The objects of this Association are to furnish instruction, provide homes, and supply the immediate wants of such destitute, homeless, and vagrant children as do not attend the public schools; to furnish them with suitable clothing, instruct them in industrial pursuits, and bring them under Christian influence, that they may thus be taught to earn an honest living and become useful members of society.

The officers of the Association, as given in the journal referred to, were: Gov. Henry D. Cook, president; Hon. A. M. Gauzemer, vice-president; John Hitz, treasurer; William L. Waller, secretary. Among the trustees are the names of Prof. James Henry, Crosby S. Noyes, Mayor Sales J. Bowen, Dr. S. A. H. McKim; among the members of the executive committee, Mrs. Huldah W. Blackford, Mrs. Z. Richards, Mrs. D. W. Bliss, Mrs. R. Doolittle; and among the members of the advisory board, Mrs. Samuel Hooper, Mrs. C. B. Boynton, Mrs. E. D. E. N. Southworth, Mrs. Byron Sunderland. As patrons appear the names of Chief-Justice Chase, Wm. H. Seward, Hon. Amos Kendall, Hon. W. M. Evarts, Hon. W. E. Chandler, Gen.

John Eaton, Alexander R. Shepherd, C. C. Willard, Mrs. President Grant, and many others.

March 12, 1872, the Association was duly incorporated. The obstacles encountered in carrying on the work of the Association proved very disheartening, and gradually so lessened the number of active workers in its good cause that but a mere color-guard remained to battle with the ever-recurring vicissitudes the institution encountered.

Finally, in the year 1875, the coöperation of Mr. Timothy Lubey, in charge of the Asylum for the District Poor, was secured, and the interest of that experienced and enlightened statesman, Governor Dennison of Ohio, then a Commissioner of the District of Columbia, enlisted. The latter readily discerned the gap in the educational system of the federal capital which the earnest people then conducting the Industrial Home School were endeavoring to fill. Upon being appealed to in their dire distress, he promptly accorded permission to the managers to occupy very eligibly located premises, comprising seventeen acres of land and buildings on the heights in the suburbs of Georgetown, belonging to the Government and used as an asylum for the poor of that section.

A report, dated October, 1876, states clearly the views held by the managers, and also the purposes and scope of the institution at the time. It says, among other things:

> "Whenever our means will permit us to do so, it is our purpose to afford better opportunities for learning trades, not only to the children of our institution, but also to the large number of youths and girls who have homes, but, owing to the regulations of trades-unions and other similar organizations, are debarred from acquiring trades. There are, unfortunately, too few industrial schools in the United States where the children of the poor and the outcast can become skilled in the mechanic arts. Our public school system, unlike that of some other countries, fails to embrace this greatly-needed accessory to the education of the masses. A great deal has been accomplished by similar institutions in Europe; and it seems eminently proper that an industrial school, on a liberal and comprehensive scale, should be established by Congress in the District of Columbia. It is true that Congress in its wisdom has established at the national capital a reform school, conducted upon the most approved plan, and destined to prove of incalculable benefit to the community; but no one will pretend to assert that a reform school, no matter how commendable is the scope of its work and efficient the manner in which it is conducted, should be the true, proper, and only supplement to the excellent public school system of the country; whereas it is undeniably the legitimate province of the Industrial Home School to be that *essential auxiliary to the public school* where the children of the poor, the invalid, the outcast, and the criminal may find the beneficent

influences of a home, and, in addition to theoretical instruction, be also practically taught trades wherewith to earn an honest livelihood, and so add to the skilled labor of the country and its productions, instead of becoming, like their parents, a public charge as inmates of benevolent and reformatory institutions."

It is noticeable that, for the first time, the report of the institution is addressed by its president direct to the government of the District of Columbia, an evidence that its managers were drawing into closer relationship with the municipal authorities, and were aiming to have it recognized as one of the public schools. Two years later the faithful secretary, in the annual report, which for the first time is found regularly incorporated among the public documents issued by the government of the District of Columbia, printed at the Government Printing Office, and sent to Congress by the President with his annual message, thus urgently advocates industrial training:

"We often feel impatient that the industrial feature of our work so slowly gains ground. For fourteen years we have pressed these ideas to public attention with all the earnestness in our power, by lectures and reports, and more particularly by our own workshop. We have established the fact beyond question that our aims are practicable; yet we are forced to witness the humiliating spectacle of organizations in other places, which have followed out our ideas, in the space of three or four years growing into large, flourishing institutions. We all recognize the fact that the greater part of mankind must get a living by some sort of handicraft or manual labor; also, that skilled labor commands good wages all over the world. It is an established fact that in similar institutions devoid of the means of industrial training, both girls and boys are apt to turn out badly, and that a large number eventually drift into idleness. And why not? They are thrown on the world at an early age with a little mental training, and nothing else, whereas if they were taught trades all would be changed. They cannot teach themselves or find places to learn a handicraft,—in fact, nobody will have them, because they are unskilled. It is clearly a public duty, a matter of simple justice to the children, and also correct in political economy, to provide the means to teach them how best to employ *all* their faculties.

"The public school system, with all its numerous advantages, is felt to be incomplete by its warmest and most intelligent advocates, because it lacks industrial training. The minds and the brains of the children are developed, leaving their hands untrained. At sixteen there are a great many bright pupils; but what can they do? We cannot expect them all to be clerks or teachers. Mr. Joseph M. Wilson, the lecturer on technology, in his able memorial to Congress last year, deplores the lack of industrial education throughout the country, and says that the children of respectable parents are drifting into habits of idleness, becoming non-producers, and eventually dangerous to the welfare of the country. Furthermore, he says that the teaching of mechanic arts and handicraft can be blended with our public school system, and the children as thoroughtly taught them as they now are the processes known by the general title of education. Thomas K. Beecher asserts that poverty injures a child's prospects more than crime, because the latter caused him to be sent to some excellent reformatory where he would be instructed in the means of self-support,—an advantage as yet denied to most children who kept the commandments. The Lord Chancellor of England, at a meeting held in Exeter Hall, London, stated that, owing to the absence of all industrial training in the schools, they were of little use to a large class of boys in that great metropolis. The whole civilized world is considering this great question, how to educate and train the juvenile population of cities, so that it shall become an advantage instead of a burden to the commonwealth; and we here again present to you, the honorable Commissioners of the District of Columbia, the claims of hundreds of children appealing to us to be taken in and made useful men and women."

This urgent appeal was transmitted to Congress by the Commissioners, and that body, at the instance of the Hon. Abram S. Hewitt, who had visited, inspected, and approved of the institution, finally extended its first financial aid, an appropriation of $5,000. To the indefatigable labors of the president of the Board of Managers, and the untiring persistency of his earnest associates, Mrs. Huldah W. Blackford and Mrs. Jane C. Hitz, is mainly due this first financial, and to the institution vital, recognition on the part of the Federal Government.

Speaking of the Industrial Home School, the Commissioner of Education, the Hon. John Eaton, has said that it belonged to a class of institutions which "*formed an important link between the public school and juvenile reformatories.*" This seems also to have been the view taken by such high authority on biological science as Dr. Elisha Harris, and also by other thoughtful writers upon the subject. The Board of Trustees of the public schools of the District of Columbia evidently concurred in these views, for, upon careful consideration, it decided to assign two teachers paid out of the public school fund to the Industrial Home School. Thus, finally, the idea so long contended for by some of the managers was in progress of being realized; viz., that this institution, like the one at Coldwater, Mich., should be made an *integral part of the educational system of the District of Columbia.*

The appropriation at the time made by Congress, although far less than had been asked for by the managers, nevertheless gave the institution a new impetus. It was decided, after first securing the approval of the Commissioners of the District, to erect at once on the premises of the Home, additional buildings, to facilitate the giving of both mental and manual instruction. Among the events of the year showing the progressive spirit of those in control, was a course of ten lessons in cookery, given under the auspices of the Industrial Home School at one of the public halls in the city by Miss Juliet Carson, the popular and accomplished instructor in culinary art. The exceedingly limited number of members of the Board of Managers was increased, by inviting to membership sundry persons who had manifested interest in the institution and among them the president and vice-president of the Board of Public Schools, who were honored with like offices in the Board of Management of the Industrial Home School. Mr. Joseph M. Wilson, the well-known champion of industrial education, was made chairman of the Committee on Industries. The Board of Managers as then constituted wisely decided to adopt in the future development of the institution the "family system," so approved of by the more advanced social scientists of the age, and Mrs. G. A. M. Canfield, of the Bureau of Education, an admitted authority upon all subjects involving the administration of benevolent and educational institutions, headed the committee having in charge the erection of the first family cottage. These efforts in the direction of advanced ideas in pedagogical and social science met the approval of Congress, and that earnest friend of schools, the Hon. Thos. R. Cobb, of Indiana, readily secured an appropriation of $10,000 for the institution.

The able report for the year ending June 30, 1808, prepared by Mr. Joseph M. Wilson, and transmitted by the president of the Board of Managers, C. M. Mathews, Esq., to the Commissioners, and finally to Congress, contains exceptionally advanced ideas, and clearly defines the enlightened character of the programme which the managers then in control had marked out for the future guidance of the institution. The number of children cared for at the time were 27 girls and 58 boys, or 85 in all. The report says:

> "The children have been organized into a 'public school,' and receive the same degree of instruction as children in other parts of the city. The chief event of the year, and to which public attention is particularly invited, was the commencement of teaching industrial occupations in an educational manner,—that is, according to the same rules which govern the teaching of reading, writing, arithmetic, and drawing. The pupils of both sexes have

had the benefit of this education, and they have manifested the same degree of aptitude as is usual for children in any of their usual school studies. The managers appreciate that the public cannot as yet see the possibility of having the industries taught by the 'pedagogical method.' The experience we have gained has lifted industrial education out of the domain of experiment, and placed it upon the foundation of accomplished fact. The commencement of industrial education required more than usual care and discrimination. It was deemed best to introduce one or two studies, and have them fairly understood by the pupils before others were begun. The studies selected were shoemaking and gardening; and as this is the first school here where such occupations are taught by a purely educational method, a notice of the plan adopted, and which has so far proved successful, is here given. Of the inmates of the Home, 24 boys and 8 girls,—being all who were old enough and sufficiently strong,—took up the study of shoemaking. These were divided into four classes of six boys and two girls each. The afternoons of four days in the week were given to this branch of their education, the other portions of the day being devoted to the usual exercises of the school. One hour was given to the instruction of a class, the boys beginning with the elementary conditions of the work, such as preparing the thread, followed by sewing, pegging, etc., the girls at cutting and pasting the uppers, etc. The attendance of the pupils was constant, in no case was there any tardiness or compulsion. It was to these children a new idea in thus seeing themselves growing to be useful and their education assuming the condition of absolute knowledge. So intelligent was the scholars' conception of their work, that within the time covered by this report,—viz., from March 1 to June 30, 1880, a period of only four months,—they had each received 33 lessons, and had acquired sufficient skill to half-sole and heel 28 pairs of their own shoes, and also made complete, in every particular, 16 pairs of shoes for their own use. The girls were at the same time taught cutting and pasting, beginning with paper, until familiar with the use of the requisite tools, and having become skillful enough, they cut out the uppers and fitted them for the 16 pairs of shoes made by the boys. The economical manner in which the shoe-school, conducted by Mr. John P. Headley as teacher, was established and carried forward can best be understood by the following exhibit: Stock and material for the shoemaking school, in which 24 boys and 8 girls were taught in classes of 6 boys and 2 girls each, from March 1, 1880, to June 30, 1880, 6 shoe-hammers, 6 pairs of pincers, 6 last-hooks, 6 knife-rubbers, 6 shoulder-sticks, 6 peg-cutters, 6 rasps, 6 straps with buckles, 6 pairs of clamps, 6 benches, 8 pairs of lasts, 17 knives, ½ pound of thread, ½ ounce of bristles, 1 package of pegs, 6 pounds of nails, buff and sheep-leather, sole-leather, 1 bottle ink, gum and heel-balls, measure-stick and strap, 1 box of eyelets, punch and set, two awls, seam-set, long stick and compass, awls and hafts, wax and pattern-paper,—the whole outfit or plant involving an outlay of $76.70. On the other hand, there was stock on hand, June 30, 1880 as follows:

Tools and material,	$37 15
Cost of materials used during the school-term,	39 55
Total,	$76 70

Cost of tuition for school term,	$100 00
Credit for 28 pairs of shoes, half-soled and heeled by the pupils, at 75 cents,	21 00
Credit for 16 pairs of shoes made by the pupils, at $2.50,	40 00
Total,	$61 00
Net cost of tuition for school term,	39 00
	$100 00

The teaching of gardening, in its two-fold condition of agriculture and horticulture, was begun March 15, 1880, with Mr. John MacTaggart as teacher. In this study the pupils were divided into classes of eight each. The lessons were daily of one hour each, mostly in the afternoon, when the usual exercises of the school were over, though occasionally they were taught in the morning from 7 to 8 o'clock They were instructed in ploughing, harrowing, sowing, and planting, as the time came round for these different kinds of work. The children thus became familiar with the soil and the manner of its cultivation, with the various seeds and the manner of their planting, also with the gathering of such crops as matured prior to the 30th of June, and other details of agricultural and gardening life. The result of their education has widened their experience, gave them some knowledge of the labor of the farm, and deepened their convictions of the value of their industrial studies.

"It is contemplated to introduce the study of cooking,—that is, the proper preparation of food,—which, in a great measure, controls the health of the people. A knowledge of this occupation opens up a wide field of usefulness for our pupils when they leave the school, and by which they may be able to support themselves. Laundry work and other branches of housekeeping, and the every-day duties of domestic life, shall be systematically taught by the educational method. Sewing, filling, dressmaking, and tailoring shall be added. The 'art preservative of all arts,'—printing, —shall receive special recognition; its value as an industrial pursuit covering an entirely different phase of manual training, is increased by its being a coördinate branch of mental discipline. Pottery work, and its affiliated branches of tile work, modeling in clay and moulding in plaster-of-paris, shall also be introduced as an educational element, convinced as we are that, in acquiring a primary conception of form, no branch of handicraft is better calculated to develope æsthetic tendencies and enlarge the intellectual capacities of the young.

"The necessity of industrial education is forcing itself upon public attention. Educational journals favor it. Educational conventions take action upon it, and earnest, intelligent, and benevolent men and women manifest a deep interest in this valuable addition to the privileges of the children. Industrial training is in no sense an innovator; it is demanded by the people at the hands of those to whom has been committed the education of the children of the nation; it is called for by the common necessities of the human race, and is justly entitled to kindly recognition as a valuable member of our public educational system. The necessities of the children are so pressing, and their school-time is so short, that those studies, which are admitted to be fundamental, should be given special prominence, and may be grouped as follows:

I. *Reading*, which includes spelling, with the definition and explanation of words; for by reading knowledge is acquired.

II. *Writing;* for by writing knowledge is imparted.

III. *Arithmetic*, including keeping of accounts; for by arithmetic knowledge is computed.

IV. *Drawing*, including geometric forms, is the basis of all industries. Without the power of drawing not a steamship could be built, not a railway planned, not a bridge constructed, not a machine made nor a tunnel bored, not a dwelling could be designed, nor the furniture which beautifies and adorns it and makes it comfortable. By drawing, knowledge is graphically presented.

V. Industrial manipulations and pursuits, which give to children the means of self-support, enables them to earn an honest living, add to the general welfare of the community, and become useful members of society. It needs no argument to prove that children, receiving such an education as here indicated, beginning with their tenth year, will, at the age of fifteen, be in a good degree prepared for a useful and honorable career in life. Though our institution is known by its corporate title of 'The Industrial Home School,' having for its main object the industrial education of the young, the managers have found themselves compelled to yield to the pressure for admission, and so children have been received too young for such training, one-third of the number coming within that condition. To start with these at the very commencement of the elements underlying industrial training, it is the intention of the managers to employ a thoroughly-trained kindergarten teacher, whose duty it will be, by strictly kindergarten methods, to inculcate the great moral and industrial principles of which the Froebel system is the embodiment

"While the managers are thus taking an active part in enlarging the educational opportunities of the young, they also acknowledge the necessity of making an advance in the manner of caring for children committed to the care of the benevolent; and they propose to introduce the 'cottage system,' to take the place of the 'institutional system' which is now in vogue. It is very difficult to change antiquated conditions; and the public has become so familiar with the dull round of 'asylum life,' that effects to break it up meet with feeble support from the people. This chronic state of affairs must be changed. The cottage or family system is demanded by the best interests of the children, it is commended by the highest authorities interested in the welfare of the young, and is being adopted by kindred institutions in our own and foreign lands. The managers propose to 'go forward' in this part of their work, and thus introduce the family mode of living, with all its benign influences; and though their means were too limited to secure such a very desirable result as a 'cottage home' last year, it belongs to the plan of this school, and will, doubtless, be erected in the near future, for the managers must have opportunities commensurate with the important trust confided to their care. The institution is supported by private contributions, by the proceeds of the work done by the pupils, and by Congressional appropriations. It is also a 'public school,' and the education, both industrial and mental, is free, and it is of that practical character which will meet the prospective necessities of the young of both sexes throughout the country. No children can have better advantages than those at this school, where every opportunity is given for acquiring a good and useful education. They are under no particular restraint; the same government which parents exercise in well-regulated households is all that pertains to the Home; and we have no regular visiting days, our institution being always open and ready for inspection."

At this period considerable was done toward realizing the high expectations which the enlightened and energetic inaugural action of the organized Board of Managers led educators to entertain. A plant or green-house, 103 feet long by 24 feet wide, equipped with heating apparatus, plants, etc., for purposes of instruction, was completed, and the first cottage of a series, each to accomodate a family not exceeding thirty children, located according to an admirable general plan prepared by the eminent landscape gardener and architect of the United States Capitol grounds, Fred. Law Olmstead, Esq., was well nigh ready for occupation, the building being named "Indiana Home," in honor of the State which had sent one of the stanchest friends of public schools to Congress. In addition to the faithful Miss Laura Strider, who had charge of the second, third, fourth, and fifth grade of the public school, Miss Mary Hatch, of New York, a successful kindergarten instructor, was duly installed as teacher of this and the primary department of mental and moral training, soon giving proof of how well they supplemented one another. Mr. W. S. Stockbridge, of Woonsocket, R. I., highly recommended as a disciplinarian, was placed in charge of the institution as superintendent.

The report for the succeeding year, ending June 30, 1881, it is to be regretted, shows a falling off in pedagogic ardor, and gives one the impression that the spirit of the educator and social scientist which pervaded its predecessor had been supplanted by that of the financier and conventional philanthropist; the distinguishing feature of the institution,—practical illustration how, in strict conformity with pedagogic principles, successfully to combine mental and manual instruction,—seemed to have waned, and the antiquated asylum idea was given undue prominence. Confidence in the success of this effort to solve the problem of industrial education was furthermore noticeably shaken by an unwise change in the chairmanship of the important Committee on Industries, and to this, in a large measure, no doubt, is ascribable the fact that, despite of the exertions of those in control of the institution, but one-half of the appropriation attainable the previous year was secured from Congress at its last session. The Hon. R. G. Horr, of Michigan, it is true, put in a most able and stirring appeal to his colleagues in Congress in behalf of the institution, but his remarks were directed rather to its philanthropic phase than to the pedagogic problem it had set out to solve; and what he said was largely based upon the advantages which accrue to his State from the model child-saving institution it had wisely founded at Coldwater. Failure to receive adequate support from Congress caused the managers controlling the institution to go from bad to worse in regard to its industrial feature. In place of inciting them to redoubled activity in providing means from private sources to increase its efficiency, a disastrously opposite course was determined on. It was decided to reduce the number of children, which then exceeded eighty, down to sixty; and the services of the teacher of gardening, as also those of the cottage matron, who at the same time was the efficient instructor in sewing, were peremptorily dispensed with.

Thus it will be seen that the Industrial Home School of the District of Columbia, which promised two years ago to embody in its curriculum systematized instruction in cooking, in laundry work, in housekeeping, sewing, dressmaking and tailoring, printing and pottery, in addition to carpentry, gardening, and shoemaking, has now, with the exception of the last-named, not a single industry taught by any recognized educational process! This condition of affairs cannot be ascribed wholly to the want of funds, as the expense of administration has not been materially lessened, but, on the contrary, taking into consideration the reduced number of children to be provided for, this item, as will be seen by the statement below, exceeds the average amount in other institutions of this class:

TREASURER'S ESTIMATES.

Expenses for the current fiscal year, ...		$8,148 00
Add salaries paid teachers from public school fund, . . .		900 00
		$9,048 00
Income during current fiscal year:		
From Congressional appropriation, ...	$5,000 00	
From Government of District of Columbia, ... ,	1,500 00	
From carpenter-shop, ...	875 00	
From teachers' board, ...	132 00	
From public school fund to pay teachers, ...	900 00	
Deficiency to be made up by collections, donations, etc., . .	641 00	
		$9,048 00

INMATES AND EMPLOYES.

Number of children to be reduced to 60, at present, ...		70
Persons comprising family of superintendent, matron, and housekeeper,	7	
Teachers of shoemaking and mental branches, ...	3	
Carpenter and seamstress, ...	2	
Servants and laundrywomen, ...	4	16
Total, ...		86

It is to be hoped that the backward steps taken by the managers at present in control of the Industrial Home School, which so long and bravely has championed progressive ideas in educational methods and social science, are temporary only, and constitute but an eclipse thst it is passing through; that it may soon reappear in the ranks of educational institutions, and, in the language of Commissioner Dent, "solve successfully the important problem of industrial education as a factor in the system of public instruction."

WHY WE SHOULD STUDY PHILOSOPHY.

BY MISS M. S. HANDLEY, LONDON, ENGLAND.

This question is only a further development of the question, why we should study at all. Why should we endeavor to learn anything, or to teach our children anything? The answers will be many, and as various as the different views of life. — its objects and aims. But in one respect there will be a general agreement. All who are not born to riches, — who have not the means of life provided by their fathers, — must learn some handicraft, or some profession; must learn to labor in some way or other, with their hands or with their brains, or with both, in order to obtain the necessaries of life for themselves and those dependent on them. That this is a primary necessity in the order of logic, though not of practice, there will be no dispute.

There is one other necessity scarcely less urgent,—the need man has to exercise his faculties; exercise of faculties is almost as imperative a need as that of earning his bread,—the suffering entailed by unexercised powers being so great as almost to compel their exercise independently of any object to be gained thereby, — though this has not been so generally recognized, and hence the many vain struggles against *ennui*.

And there is yet one other, — the need of making life happy, pleasant, enjoyable; man ever strives to do this in some way or other, although the notions as to what constitutes happiness greatly differ, — some holding it to consist in self-sacrifice, others in self-realization, others again in mere self-gratification. Thus we have got two answers, both very elementary and general, though the first is sufficiently definite. We must learn to do some kind of work that will enable us to get the food which is needful to keep man alive upon the earth. The second is more vague and indefinite. We must learn something that will make this life, which we are endeavoring to sustain, worth sustaining.

And now comes the question, what this something is. Is it one thing, or is it many? Is health, riches, honor, any amount of material prosperity, however widely distributed, sufficient to satisfy this demand? or is there a deeper need in the heart, a need which these cannot satisfy? and, if so, is there any science answering to the demand,—a science which may be compared to the underlying granite, upon which, wherever we begin to dig, if we only go deep enough, we are sure to come, — which supports alike the sandy deserts and bleak wastes, the fruitful fields and rich pasture-lands, the wooded heights and sunny slopes, the little garden-patches of the poor and the stately pleasure-grounds of the rich, — a science whose problems we cannot altogether avoid, however superficial the lives we lead, and which no earnest seeker in any branch of knowledge whatever can possibly help encountering? Our answer to this latter question will determine one answer to the previous one. What shall we learn? or what shall we teach? — the two are answered in one, for which we find it most helpful to learn we shall endeavor to teach. What, then, must we learn? What is it that we want, in order that the well-spring of joy may flow through our lives?

Those who think that health, riches, honor are the great things to be aimed at, will, if they are wise, study the laws of health, and carry out those simple rules as to fresh air, nourishing food, exercise, which are now being so generally enforced. They will work diligently, but with moderation, at those occupations by which money is earned, and their moral conduct will be such as to win for them respect and esteem, and to such it may be confidently affirmed life will bring a large measure of enjoyment. It would be foolish as well as idle to assert that health, riches, and honor do not produce a great deal of pleasure, and combined with some degree of mental cultivation, may assure their possessor a large amount of happiness. The only question is, Would it be a life that would be quite satisfying? If there are any who answer "Yes," I suppose these would not be tempted to seek further; for them a science which taught a deeper lore would hold out no inducement.

But there is another answer possible. There are some who say that the only true enjoyment consists in doing good, in helping others, — who have set before them some scheme of philanthropic labor; who strive to teach the ignorant, nurse the sick, or give their help to some of the many schemes for developing the mental and moral powers of their fellow-men. And much as we must all admire these earnest workers, I would again ask, Is even this noble devotion quite satisfying? Does their work answer all the needs of their nature? Does not another want sometimes make itself felt, which, instead of lessening their interest in their work, would only deepen it?

Is there not one vital need, one want, which troubles life with a secret unrest, the existence of which, however little explicitly realized, is yet the true cause of the anxiety which eats into so many lives,—

the need, namely, of having some assured ground for our beliefs, which would enable us *really* to *believe*, and not merely believe we believe, hope we believe, try to believe,—give us the firm assurance, the unassailable conviction that there is something wholly trustworthy; that deep in the heart of things there is a power "that makes for righteousness;" that we are not strangers and pilgrims in the universe, but *at home* in its vast realms, because a Father's love has given us the freedom of all its mighty kingdoms, and enabled us to interpret what nature would tell us as a spirit like unto our own, breathing in all her varied life?

If there is such a need, we have found the answer we have been seeking. We must study the science, if there be any such, that will furnish this most necessary knowledge and that there is, has, I think, been conclusively shown by Mr. Shadworth H. Hodgson in his address to the Aristotelian Society, at the beginning of the last session.

All who consider the stability of religion of grave importance to the well-being of man must feel grateful to him for an analysis which shows that the great importance of speculative philosophy lies in the fact that it alone gives the intellectual basis for religion, the intellectual security for any state of mind " which is to combine the largest conception of *true* fact with the highest conception of *right* action."

Another important point which he shows is the close connection between volition and reasoning; that they are, in fact, elements of the same act, only differing in the interest which prompts them; and that from these inseparable elements flow respectively the two streams of speculation and practice. We all know the importance of the will in influencing conduct,—how, if we can only get the will on our side, we can train children, servants, and soldiers to the highest efficiency possible; and since this is so, and the root of volition is in feeling, we can see that the "crucial point for morals is to get to feel actually and habitually as we know we ought to feel," and that it is here that " morality passes into religion," because man, earnestly desiring to do that which is right, realizes his weakness, and is thus led to look to a Higher Power for aid.

This tracing to their source the reasoning and volitional power of man is so important, because it enables us to realize that it is the same God which both the reason acknowledges and the heart loves; there is no strife, no variance between these two functions of man's nature, as their source is one, so is their object, only they apprehend it differently, because the inspiring interest is different in the two cases; the interest of the one is purely speculative, namely, to know the truth,—that of the other is practical, to do that which is right.

One other very important result of this analysis is, that it traces to its sources the irreligion so often ascribed to men of science, and shows that, if it is irreligion, it is at least not atheism. It enables us to see that many who hold views which they themselves regard as the result of a large-minded search for truth, but which are regarded by others as atheistical, — that is, by those who, though zealous for religion, are yet fearful for its safety from want of perceiving how securely its foundations are laid in the very heart of things, it enables us to see that these are in very truth the reverse of atheists. We might indeed have suspected this,—for what kind of a universe would that be in which earnest search for truth should lead to atheism?

The Rev. Stopford Brook has shown that what these scientific men really believe in is truly God, but conceived only as Infinite and Impersonal; and valuable as these sermons are, and thankful to the author as all must be who realize the importance of enlargement of view on so grave a subject, the tracing these two forms of worship to their source, as Mr. Hodgson has done,—following Kant, but disembarred of his notion, that the speculative and practical reason are two faculties of mind,—is still more helpful in promoting a just and honoring estimate of our fellow-men, and correcting narrow-minded prejudices.

I do not know how it appears to others, but to me Kant's ascribing our belief in God to the practical reason, after having shown that the speculative reason can give us no assurance of His existence, has always been unsatisfactory. But when Mr. Hodgson shows that the belief has its source both in the speculative and in the practical use and application of thought, and that to the former the Infinite necessarily appears as Impersonal, and that it is our practical need that makes us regard the supreme power as personal, our knowledge of the divine nature being drawn almost entirely from the relations in which we feel to stand toward it, and yet that both these sources are equally trustworthy, both being branches of philosophy,—the one speculative and the other practical, — then, indeed, we feel that all doubt is impossible; the universe is transformed; all barriers, all blinding fogs and mists are swept away; we breathe the pure health-giving breezes of our native land, and realize our sonship in the home of the eternal.

Mr. Hinton says: [1] "People think philosophy can never be in itself influential on, or regarded with interest by, the people generally. I am not so sure of this when philosophy is renewed; it was so of old when it referred to matters of universal interest, to the instincts of truth, justice, piety, — in a word, to rightness. Why may it not become so again ?"

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[1] Philosophy and Religion; p. 48.

This is the point to which I want to draw attention. It is its being the only *assurance* as to the *trustworthiness* of our ideas of *rightness* that constitutes the claim of philosophy to general attention and interest.

That philosophy is not a subject concerning which men can afford to be indifferent has been shown by many teachers. Coleridge says :

> [1] "And still less are they inclined to refer the latter (national events, particular measures) to the ascendancy of speculative principles. . . . Yet it would not be difficult, by an unbroken chain of historic facts, to demonstrate that the most important changes in the commercial relations of the world had their origin in the closets or lonely walks of uninterested theorists ; that the mighty epochs of commerce that have changed the face of empires,—nay, the most important of those discoveries and improvements in the mechanic arts which have numerically increased our population beyond what the wisest statesmen in Elizabeth's reign deemed possible, and again doubled this population virtually, — the most important, I say, of those inventions that in their results
>
> "—— best uphold
> War by its two main nerves, iron and gold,"
>
> had their origin not in the cabinets of statesmen, or in the practical insights of men of business, but in the closets of the uninterested theorist and in the visions of the recluse genius. To the immense majority of men, even in civilized countries, speculative philosophy has been, and must ever be [?] a *terra incognita.* Yet it is not the less true that all the epoch-forming revolutions of the Christian world, — the revolutions of religion, and with them the civil, social, and domestic habits of the nations concerned,—have coincided with the rise and fall of metaphysical systems."

Maurice again shows, by numerous instances in his History of Philosophy, the intimate connection between the every-day life of any period and the philosophical system prevailing at the time ; how these both arise from and react on the thoughts and feelings which are stirring in the men busied in the streets and market-places of their nation, that we cannot even understand a philosophical system if we try to separate it from the life of the people amongst whom it arose. And Mr. Herbert Spencer says the philosopher is the true king, the *de facto* ruler of the nation ; and Emerson, that whatever system of philosophy you study, however foreign it may seem to your thought-life,—only master it, and it will give you back facts of your own consciousness, having interpreted some of these to you

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[1] Statesman's Manual, lay sermon ; p. 16

If, then, the connection is thus close and intimate between our every-day life and philosophy, can we afford to neglect this subject of study? The fact is, we can neglect to *study* philosophy, but we cannot help philosophizing after some fashion,—that is, we can refuse to do consciously and rationally what yet we shall find we do do in some way, and, therefore, if not consciously and rationally, it must be in some hap-hazard, unconscious manner; we cannot help doing it; "interest in the moral 'why' has too deep a hold upon our nature." It arises out of the moral law, which, as Mr. Hodgson shows, is summed up in the one command which we cannot disobey, "Choose and take the consequences." Questions as to the rightness of actions are daily, hourly being forced upon us, and philosophy alone can give the answer; for what is the criterion of rightness? Is it not "action in harmony with the universe"? and what science except that whose scope is to give the rationale of the universe, and analyze the facts of consciousness, can give the answer?

I have said all men must philosophize. They must and do; the important question is, *How?* This is a question that each must answer for himself. Shall we leave it to chance; take up whatever opinions happen to prevail among the people with whom we are thrown, or which the prevailing literature of the time is advocating; or shall we venture to test for ourselves the foundations on which we are building,—building not houses of clay, which the storm or the whirlwind may destroy, but our hopes of eternal well-being?

But is this possible? The answer generally given is, "Only to the few." Even Coleridge, though he speaks of the importance of philosophy and its constant influence on every-day life, says it must ever be a *terra incognita* to the many. The devotion of a whole life is, of course, an impossibility to the many,—the system-makers,—the great seers and teachers of the race will, we may suppose, continue to appear only at rare intervals. No one would urge us to become philosophers in this fashion. To become geniuses is not in our power. But seekers for truth we all may be, and for this it is not so much *time* that is needed as *interest*. Mr. Hinton says: [1] "Enlargement of view is all that is needed to enable us to apply the principles of natural doctrines which are always true, rightly"; and for this "enlargement of view" a judicious course of reading, tracing the development of philosophy from its source in Greece, showing how it received as it flowed down the ages the mighty stream of Christian teaching, and thus became blended with the other, the Hebrew source; how it was enriched by the discovery of the New World; the invention of printing and the revival of learning; the new method fixed upon by Descartes, and still further developed by Kant, and carried out to fruitful results by still more recent thinkers; a course of reading that would thus strace step by step the advance in philosophy from its first arising to the present time, if wisely directed, would not take more time than is commonly devoted to many subjects of far less truly practical importance for the conduct of life; and would be all that would be necessary to put a man in a position to carry on the study for himself. The varied events of every-day life,—books, people, holidays, work,—would all supply material for this study.

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[1] Philosophy and Religion; p. 8.

But we need the help of some one possessing the analytic power in a high degree to show us how to set to work, and this I consider the great value of Mr Hodgson's analysis; we can, and, indeed, *must*, do the work again for ourselves, if we are to derive any real good from it; but there is the cheering hope to inspirit each worker, that *he* may be the one to light upon some new discovery, to bring to light some important fact that has been overlooked by previous seekers; and in any case we must be discoverers for ourselves, even if the discoveries have already been made by others; we must *see* for ourselves that they are *facts*. But the importance of getting a good start is universally acknowledged; in no subject is it held to mar the originality of work; we all enter on the heritage won for us by our fathers, which we hope to hand down enriched to the next generation. In no subject is this more fully realized than in science properly so called, and in no subject is need of self-verification more highly lauded. Yet, if this is true of science, it is certainly not less true of philosophy; it is quite as impossible in philosophy as in science to take things for granted. This need of self-verification which is held to constitute science such a valuable educational instrument must constitute philosophy even in this respect equally valuable, though not one that can be employed at so early an age. It is here that the maxim applies: "First in genius, last in analysis." Philosophy, as being the foundation of the sciences, cannot be any early subject of study. Plato's idea was that music and gymnastics should first be taught, and then the study of dialectics entered upon; besides, it is the material already prepared by science that philosophy employs as part of her subject-matter; she takes the highest generalizations of science as objects to be analyzed; but I must not go more into detail. I cannot make any one *know* even part of the benefit to be derived from the study I am advocating. I can only give the cheering advice, "*Taste and see,*"—this always to me most reassuring,—for no one would say "Taste" unless they felt it was something *very good* they were offering; and yet we often should not be tempted to taste unless some one said, "It is *very* good."

To sum up, "Why should we study philosophy?" Because it alone can answer those questions in which man is most deeply interested, — questions as to the "why," "whence," and "whither" of man himself. It alone can teach man how he ought to act; in what true rightness of action consists. Make clear to the intellect as well as to the heart that God is his Father; that he is and ever will be at home in one of the many mansions of his Father's kingdom. It, and it alone, can take away the sense of strangeness, discomfort, and unrest by making us know that the spirit that breathes in nature is the spirit of love akin to our own, and that, therefore, it is within Him that man will find the key to solve all mysteries; that there are no mysteries to appal, but only vast regions of wisdom and knowledge to be made our own, and that these we shall master step by step if we only work earnestly, faithfully, watch and wait.

So much for the "why"; the "how" I have not attempted to answer. The "why" comes first with all who are of an age to choose their own sphere of work. With children it is different. They must learn something of the "how" first; but the man would not be willing to devote long hours of patient toil to any work which did not promise a sure recompense and reward, — hold out hopes that the pearl would be so precious, the jewel so bright and lasting, that it would repay a thousandfold the labor bestowed on its acquisition.

GLIMPSES OF PRACTICAL WORK ABROAD.

BY A. N. EVERETT.

A popular writer has recently referred to the beauty of the Queen's English as spoken by the English Queen. Is there any veracious chronicler of our time who can conscientiously set forth, after careful observation, the beauties of the American language,—a tongue essentially *sui generis*—as spoken to-day by the sovereign American people? By some philologists anxious to "act in the living present," as well as speculate upon the past, it has been claimed that the only means to precipitate, as it were, a definite and permanent language from the colloquial and provincial inaccuracies held in solution among us, was to introduce Greek and Latin roots and constructions, with the idea that, by some subtle chemical affinity, our forms of expression would in time crystallize into the elegant symmetry of the classic tongues. But the acquirement of such knowledge, or the ability to use it, belongs only to the more scholarly, and is an influence whose slow action is more than neutralized by the rapid inventions of our slang-bewitched people.

In the opinion of many, another means of attaining the same end is the study of the modern languages. The yearly tide of migration leaves stranded on our shores hundreds of thousands speaking the German and French dialects of the lower classes far better than our masses speak our own tongue; while its ebb bears thousands of Americans to the great continental capitals, where the most polished languages are the medium of all social and business intercourse. From these two conditions the practical worth of a knowledge of French and German has been so far realized in our country that these branches have been incorporated in the curriculum of all our higher grades of schools. How far, in either ancient or modern languages, the methods pursued, the thoroughness acquired, the results obtained actually tend to the mental discipline of the student and his consequent precision and elegance in the use of English, practical teachers in our country must decide. At the same time it may be interesting to learn the ideas with regard to such studies in other lands.

Take, for example, one of the more remote. Few Americans would dream of turning to Russia for enlightenment on the subject of higher education for the people, since the general opinion prevails among us that, under the peculiar governmental and religious despotism of that country, the voice of the people for justice, liberty, and progress is "*vox et præterea nihil.*" During the last year, in one of the more distant provinces of Russia, in compliance with a direction from the Chief of the Bureau of Education, a commission of teachers was held at Tiflis for the purpose of considering means for improvement in the teaching of ancient languages. In a communication subsequently addressed to that body, M. Janowski calls the attention of the members to the absolute necessity for better results in the study of modern languages, and suggests three topics for discussion: (1) The aim in view in actual instruction in those languages in institutions of the grade of our high schools; (2) Means actually employed to obtain that aim; (3) The opinions of noted instructors upon the utility of the prevailing pedagogical principles in regard to languages in general and modern languages in particular.

With regard to the aim, the whole course should enable the pupil to acquire a thorough acquaintance with etymology and syntax, and at the same time be in a condition to understand quite difficult authors, — thus enjoying the literature of the West, — and to translate correctly from Russian into the language in question.

"Now," continues M. Janowski, "however desirable such an aim may be, it must be confessed that it is seldom attained; in by far the greater number of schools the pupils are not even familiar with etymology, and, consequently, syntax is absolutely unknown; some pupils cannot even read correctly at the end of the course. It is useless to add that they are not in a condition to appreciate the beauties of Western literature, while translation into French or German presents insurmountable obstacles." Should a similar state of things in our own schools fall under the observation of any American instructor, it may be consoling to see by what means it is proposed to remedy the defects, — first stating, however, the further requirements of the advanced course which Russian pupils must meet. In the girls' schools, graduates must understand easy historical works, and translate such into French or German; be familiar with the classic authors of those languages, their biographies, and the principal historic facts which they mention. In the Ecoles Réales is required the comprehension of works on Natural History and technical subjects, translation of difficult fragments from Russian, and original themes on subjects connected with the manufacturing and business interests. Students taking the mercantile course must not only understand French and German business-letters, accounts, bills of exchange, and all other documents pertaining to business relations, but must be able to translate all mercantile papers from Russian into either language.

As a result of the methods of instruction in use, in which mere mechanical reading without comprehension has so large a part, it is found that pupils become wearied, accomplish but little, and acquire an antipathy for the language and reading which, in such style, can only satisfy those of moderate ability, and blunts their intellectual faculties. The manuals in use also are made up largely of mere phrases, embodying grammatical rules without connection, while the programme pursued seems based on the idea that grammar is the sole means of studying a foreign language; that abstract rules are as comprehensible by children as by grown people, and that examples must be drawn from rules, not rules from examples.

Before developing his own remedial views, M. Janowski quotes the opinions of several renowned authorities, among which are those of Beneke: that a pupil should always understand what he is learning; that perceptions by the ear, as in phrases and anecdotes, are preferable to those by the eye,—therefore one of the best means to convey a keen impression is to cause words of the master to be repeated by the pupils; that grammar is as difficult as algebra and geometry, and should not be taught to beginners; that conversational exercises are better than elementary reading, the combinations of which absorb a scholar's attention to the detriment of his intellectual action; and, finally, that of Goethe, — that every foreign language is more easily learned by practice than by rules. It is to Charles Maguère, so noted for the extent and depth of his learning, that M. Janowski directs all teachers in the effort to attain a natural method in teaching modern languages. According to his system, each lesson consists, first, of a number of French propositions, in which one grammatical rule predominates; secondly, of the explanation of that rule; thirdly, sentences in the mother-tongue, to be translated into French, the learning by heart of which gives the pupil a stock of words and phrases selected from the works of the best French writers, and acquaints him, unconsciously, with grammatical rules and the spirit of the language. Maguère arranges his manual in conformity with the method of Pestalozzi, so that a new rule springs from each lesson, and contains a repetition of the one preceding. For three or four months at least, the exercises should consist of variations on the following plan: By means of questions and answers, first in Russian, the pupils will learn the names of the objects which surround them, their qualities, actions, or states: as, "What is the name of our room?" Answer: "Recitation-room." "How many windows, maps, etc.?" These phrases, in French, by the master, will be repeated by each scholar, then by the whole class several times, with questions as to the meaning of each word; the part of speech to which the word *classe* belongs is given in both languages, and the question, as learned, is asked by some and answered by others. Finally, a complete description of the room and its contents will be put together, and repeated by each and all; after which they readily turn to that of familiar objects at home and elsewhere. This will continue three months at least, in order to accustom the scholars to correct pronunciation of words, and let them gain the ability to express the simplest thoughts.

Since all the pupil learns will serve his intellectual development only when it is the result of active and not passive exercises, and since, when studying a foreign language, he can already read and write in the mother-tongue, it is urged that great attention be paid to the analysis of each known French word, giving the sounds by the corresponding letters, thus also learning the rules with regard to *e* mute, final consonants, etc. This process results in much greater thoroughness than is gained by observation in mere mechanical reading.

Before beginning to read easy selections, the substance of the translation must be given by the teacher, the pupils encouraged to ask questions on it in Russian, then in French; the extract then read, copied, and finally learned by heart, and recited singly and in concert. Great importance is attached to such recitation, especially in lower classes, as, with great saving of time, they not only learn correct pronunciation and accustom themselves to use the language, but also speak with greater ease and expression.

Such work will bring scholars at the end of the first year to a thorough knowledge,—gained always and only from oral teaching and extracts read,—of auxiliary and regular verbs and the nature and use of articles, nouns, adjectives, personal and other pronouns; all questions on grammatical points *must* be in both the foreign and mother-tongue.

In the second and third year special attention is given to grammatical analysis, everything relating to etymology and syntax in the selections with which they are already familiar, and to absolute grammatical principles, as well as the declinations, conjugations, and relations of words and propositions. Every master, who works conscientiously and possesses experience in teaching, will always be in a position to guide his pupils in these studies; and a master, says Maguère, "who cannot act thus, should not take it upon himself to teach." In the last three or four years technical study of the language goes on, with more difficult reading, if possible, in that connected with other branches of instruction, especially in history. In the fourth year the ability should be acquired to read entire works with ease, and to give a résumé of the contents of works read; as a pupil, finishing his course, should have gained the ability to clearly understand profound writers. It would be well, perhaps, for the pupils to give abstracts of works read, instead of Russian compositions, the teacher, however, taking care in assigning subjects drawn from such literature to indicate their source, and to compare Russian authors on the same subject. One branch of study in the highest classes might be entirely conducted in a foreign language. For the systematic study of grammar, which should be active rather than passive (the reverse being too often the case), pupils should be sufficiently developed intellectually; to reach this aim the master must only be the guide to direct the pupil in tracing results and formulating rules of the foreign language, comparing it with those of his own. Certain grammatical problems, as it were, should be presented, method of elucidating explained, and the rules applicable suggested. What is at first done for him, the student will eventually do for himself.

In conclusion, M. Janowski then submits these views in the form of questions for discussion by the Convention, urging that the attainment of solid, practical knowledge and ability to actually use a language should be one of the principal aims in view in its study.

In America there is not wanting an appreciation of the wealth of French and German literature, while an idea of the value of a knowledge of the languages in business and social relations is constantly on the increase. Would not, in our high schools and colleges, that method of slow, always *slow* and thorough study of one spoken foreign language, in connection with other English branches, through the whole course of from four to seven years, result in something different from our present superficial acquirements? Might we not, perhaps unconsciously, absorb that correctness, that delicacy in shades of meaning, that courtesy and grace in thought and utterance, the absence of which renders us at present, though the most warm-hearted in feeling, probably the most ungracious and inaccurate in expression of any people.

ALONZO A. MINER, D.D., LL.D.

In the wars between France and England to which belongs the renown of Cressy and Poictiers, the English sovereigns accepted such assistance in men and munitions as their subjects could proffer. Henry Bullman, of Somersetshire, was a miner, and fitted out a company of one hundred miners armed with battle-axes, many of them laborers in his mines, and presented them to Edward III. for his use in the Continental wars. Grateful for the service, Edward conferred upon him a coat-of-arms, and gave him the name "Miner." Edward Bullman "Miner," the first of the name, died in 1539, and his descendant, Thomas Miner, came to America, with the elder Winthrop, in 1630. Charles Miner, of the fifth generation from Thomas, was in the Revolutionary War, and at its close moved from Connecticut to New Hampshire.

Alonzo A. Miner, whose steel portrait embellishes this number of EDUCATION, was the grandson of Charles and the son of Benajah, and was born at Lempster, Sullivan Co., N. H., August 17, 1814. His biographer, speaking of his early life, says: "Mr. Miner inherited neither fortune nor even health. Mental powers, a constitutional integrity, and a lack of the lower ambitions came as his only birthright. All else is his by conquest. Till the years of late boyhood he was an invalid. His opportunities for education in the village school were very intermittent. His feeble health and a grave uncertainty as to his ever reaching manhood, constantly broke in upon the systematic training of the school, and he filled out his school studies in the invalid's chair at home. None predicted for him length of days; even the cautious physician allotted him only thirty years of life." Between the home, the village school, and the academies at Hopkinton, Lebanon, and Franklin, N. H., and Cavendish, Vt., he obtained all the school-training of his life. At sixteen his health was sufficient to allow him to teach school, and his success was so marked that he was promoted to be an associate, and then principal, of the academy at Cavendish, Vt. Then he was called to establish an academy at Unity, N. H. This school started in 1835, called the Scientific and Military Academy, was for both sexes, with military training for boys. His success was far beyond expectation, and his school numbering as high as one hundred and fifty pupils. August 24, 1836, he married his preceptress, Maria S. Perley, who has ever since been his faithful and devoted wife.

In his religious and theological life Dr. Miner was a "born Universalist," and although he had won a flattering success in teaching, his mind was bent toward the ministry so strongly that urgent calls to teaching did not dissuade him from his strong purpose to preach the Gospel, and he began his pulpit-work in connection with his school-work, preaching his first sermon at Chester, Vt., in February, 1838. He was ordained as a minister in 1839, and he soon won a reputation for very unusual gifts as an orator, logician, and preacher. His successive parishes were Methuen, Mass., 1839; Lowell, 1842; School street, Boston, 1848 (which parish removed to Columbus Avenue Universalist, Boston, 1872); in all of which he has rendered most valuable services as organizer, pastor, and preacher.

Dr. Miner's work as an educator did not cease on entering the ministry. His experience and wisdom were sought and secured on the school boards, and for public addresses on educational topics. His great work as a public educator, however, is connected with Tufts College and the Board of Education of Massachusetts. In the movement to found a denominational college Dr. Miner occupied a foremost place, and the raising of one million dollars for its establishment is in large measure due to his courage, faith, and indomitable purpose. On the death of its first president, Rev. Hosea Ballou, 2d., D.D., Dr. Miner accepted the presidency, and he was installed to that office July, 1862, and fulfilled the arduous duties of the presidency of a young college with such fidelity and success as to place the institution on a firm foundation, financially as well as intellectually. His presidency comtinued till 1875, when an able successor was found to take the position, and Dr. Miner was relieved, to enter again upon the full pastorate of his Boston church, over which he ministers with the growing trust, affection, and devotion of a very united people.

In connection with the system of public education of Massachusetts, Dr. Miner has done most important service. His practical mind and thorough understanding of the needs of the people make him a valuable adviser in educational affairs, and his re-appointment for a second term of eight years is the best testimony to his faithfulness in this department. On the occasion of his departure for a short period to California, at a public dinner in his honor, Governor Washburn bore testimony to the inventiveness and far-reaching wisdom with which he was aiding to advance the educational interests of the Commowealth. He has been eight years chairman of the Board of Visitors of the State Normal Art School of Massachusetts; has served as one of the Overseers of Harvard College, and is numbered among the "Hundred Orators of Boston."

Dr. Miner is well known throughout the country as a life-long and staunch temperance reformer. His arguments in favor of prohibitory temperance legislation are unanswerable, and his addresses on all platforms are able, eloquent, and convincing. His uncompromising opposition to the rum traffic has made him enemies as well as friends, but his honesty and manly courage are admired by all. As a real educator of the people, in all that relates to their true elevation and advancement in mental, moral, and spiritual affairs, Dr. Miner holds a place in the front rank of the leaders of our time, and his life illustrates the power and position which a true ambition and a real inspiration gives to man in doing the world's work.

In 1863 Harvard College conferred upon him the honorary S.T.D. He had received an honorary A.M. from Tufts in 1861, and that of LL.D. was conferred in 1875 by the same College.

Dr. Miner is still in the exercise of all his great powers for the good of man, and looks with an unfaltering faith on the real conquests which truth and righteousness are to make among men, that they may be called the sons of God.

EDITORIAL NOTES.

The extent of the spirit of independence in the United States must give satisfaction to all Americans who have at heart the welfare of their institutions. The growth of "bossism" has been rapid during the few years past; the independence of the voter has been put in jeopardy; the integrity of citizenship has been assailed. But times are improving; the citizen declares himself to be a man "whom nobody owns" except himself. Civil-service reform is a principle of liberty; independence in voting is the essence of liberty. Political organization is discriminated from sworn allegience to a demagogue; the political tyrant is despised. Have the schools been instrumental in bringing about this improved sentiment among the people? They have done little or nothing toward it, which fact shows that schools are made by society, not society made by schools.

Dr. Howard Crosby, of New York, in a recent address, declared the present system of athletic sports in connection with clubs in our larger American colleges, "an abomination of the first order." It is high time that this mischievous side of college-life should be exposed and denounced by the intelligent public, if college presidents, faculties, and boards of trustees fail of their duty. There are, doubtless, great perils besetting the free University system, under State control; but there is this advantage, that any abuse can readily be exposed and brought under fire of a healthy public sentiment. But the system of close corporations under which many of our older Eastern collegiate, professional, and academical schools are managed affords abundant opportunity for abuses that undermine the spirit and defeat the noblest ends of scholastic life. The barbarous practice of hazing, and the brutal and sometimes bloody contests between rival classes of the same college; the aping of aristocratic, British university-life, with its luxurious living, waste of time, intolerable prodigality and sometimes profligacy; and the pitiful habit of hanging about the doors of rich men to keep this stupendous machinery in motion; to say nothing of the bitter strife of personal, sectarian, and social prejudice,—all these and other evils perpetually tend to an educational dry-rot far more dangerous than any evils yet developed in the State University system. The whole department of corporate, denominational, and private education will flourish in our country just in proportion as it shows itself sensitive to advanced public opinion on these crying abuses. No university is powerful enough to resist the gathering tide of demand for thorough reform in this department of college-life.

ONE of the famous educational names of Ohio is attached to the latest scheme from that prolific land of projects, to rescue the students of our great State universities from the blighting effects of the secularism that, according to the observer, reigns within their halls. The writer proposes to remove several of the weaker denominational colleges to a university town, like Ann Arbor, and place them in a sort of qualified relation to the great University, while holding their students fast to the denominational type of religious discipline. We fear the result of this would be the emptying of the little colleges into the big universities. A good deal of observation of American colleges of all sorts fails to confirm the sharp line of distinction between "Christian" and "secular" institutions which forms the basis of this scheme. Practically speaking, the difference between the great University of Michigan and the little college of any particular denomination in that State is, that while the latter are worked industriously to build up one branch of the Christian church, the State University includes in its faculty able representatives of every Christian body, and gives to its students the ordinary American right to worship God in churches of their own choosing. In point of fact the State universities are not secular in the extreme sense. They maintain devotional exercises and, as in the case of Cornell, support an admirable system of Sunday services by eminent clergymen. Their students can form societies for religious improvement, and, as at the University of Virginia, maintain the "Young Men's Christian Association," and largely engage in mission work. In Christian morals and manners, the State universities are fully abreast of those of any Christian sect. Many of the evils imputed by the religious press to our system of unsectarian public instruction are either chargeable to outside causes or exist only in the excited imagination of the zealous friends of rival institutions. Until the manners and morals of the ordinary American college student are considerably elevated, it would seem that the zeal now directed to the wordy disparagement of the free high and normal schools and State universities might be more usefully employed in applying the Christian doctrine preached in the chapel to the mobs of sophomores and freshmen in a "cane-rush," the practices of the base-ball or boat clubs off on an athletic lark, or the destructive and expensive snobbery of "society" life in their own educational preserves. The conduct and character of a crowd of students of either sex is far more in the way of wholesome improvement when brought under fire of the moral and religious public opinion of an American

Christian community than when shut up to the despotic, and sometimes whimsical, scheme of spiritual discipline of a corps of professors restricted to one sect, with no opportunity for outside observation, or protest save the removal of a student, or a college quarrel like that which now disturbs Union, and last year harrassed steady-going old Dartmouth. More insistance on righteous character is now the best spiritual term in American college life.

WHAT is the duty of teachers when a minority of the trustees who employ them wish them to resign their connection with the school? This question is an important one to teachers. If a board hires a teacher, and then a minority oppose him, should the teacher leave his post that another teacher, whom the minority might approve, may take his place? The emphatic answer to these questions is, that the teacher should abide by the will of the legal majority. American institutions are based upon the will of majorities. When a man is elected to Congress by a majority of only one vote, he retains the place which the majority gave to him, and no one questions his right or his wisdom in accepting the office which belongs to him. The principles of government and administration which are involved in the case are plain. But there has grown up, in some quarters, an opinion that if there is opposition to a teacher he shonld instantly gather up the folds of his garments and depart to remote portions of the land. This position raises the fundamental question, whether a teacher has any rights which are entitled to respect and protection by the laws. Every teacher who obeys the wishes of the opposing minority and vacates his position helps to create and confirm a public opinion which acts against the reputation, rights, and honors that belong to the profession. It is the imperative duty of teachers to guard with jealous care the inalienable rights which belong to them as citizens, as employees under contract, and as independent men and women.

Another form in which the rights of teachers are ignored is the theory that a teacher should be dissmissed by a board whenever criticism arises against him among his patrons; the theory holds that the usefulness of a teacher is always measured by his popularity. A graver error than this theory never found currency among an intelligent people. In no occupation can charlatanism cover up its mischief with greater ease than in teaching. Any course of procedure falls signally short of being valuable to society which fails to educate people to respect and honor right and integrity above personal desires. Right and duties should be popular with pupils; the teacher is simply the medium by whom the integrity of business is made effective and prominent to children. Teachers should respect the rights of others and compel others to respect rights due to themselves.

FOREIGN NOTES.

GREAT BRITAIN.—*Secondary Education.*—We hear so much of the great "public schools" of England that it is difficult for us to realize that secondary education is within the reach of but a small proportion of the youth of Great Britain. The subject has received much attention from the Education Department during the past year. The Education Endowments (Scotland) bill, which was pushed with so much energy by Mr. Mundella, will increase the means of secondary education in Scotland. The Endowments bill went into operation Nov. 1. The circular addressed by Mr. Mundella to the Welsh Boards of Education with reference to the establishment of higher grade Board schools, has accomplished some practical results. In England, Leeds, Manchester, and Bradford have established schools of the higher grade, and the new School Board for London will doubtless proceed at once with the same work in the metropolis, in accordance with a resolution that passed the late Board by a large majority.

In this connection it is interesting to observe what is being accomplished by scholarships which enable youth of exceptional ability to pass from the elementary school to some place of secondary education, and thence to the University. There are 49 such scholarships in the control of the School Board for London, 30 at the disposal of the Liverpool Board, and a less number at Manchester, Birmingham, and other towns. A single example will illustrate their importance. In 1873 Mr. Barker, a scholar in one of the schools of Marylebone, gained the Mortimer Memorial Scholarship, the first placed at the disposal of the London Board. He proceeded at once to the City of London School, where he took numerous prizes. In 1879 he gained a Foundation Scholarship at Trinity College, Cambridge; and here, in 1881, achieved the first place, in the first class, in the "First Classical Tripos Examination."

Training School for Teachers.—Among secondary schools must be classed Training Schools for Teachers. Until a recent date pupil-teachers have been trained by the head-masters of the schools in which they served. Schemes for the central instruction of pupil teachers are now being adopted in the leading cities, and the result promises to be a class of institutions resembling somewhat our normnls, which have a course of one or two years. Great activity is also manifested with reference to the training of teachers for secondary schools. The College of Preceptors has recently been able to increase its provision for this work through the liberality of the Stationers' Company, who have thrown open their well-known school in Fleet street, as a practice school, to a selected number of students from the college training-class. It is hoped that other secondary schools in London will follow the example. Finsbury Training College, for those who intend to become masters in middle and higher schools, opens Jan. 17.

FRANCE.—*Secondary Education.*—In July, 1880, the law creating the fund for lycées and colleges was passed. Since that date the sum of thirty-eight million francs has been appropriated for these institutions, of which ten million ($1,900,000) have been exclusively for lycées for girls. The law establishing this grade of instruction for girls was passed Dec. 21, 1880, since which date twenty-six towns have determined to adopt the measure. Paris has not responded, but seeks to accomplish the same end by means of superior primary schools. The municipal authorities are evidently not disposed to coöperate with the general government in the support of institutions which must be submitted to the control of the latter. The most earnest advocates of the law of 1880 desired that the lycées for girls should be placed upon the same footing as those for boys with reference to admission, length of course, and test examinations; public sentiment does not seem to favor so radical a measure, and the "Superior Council" has issued decrees adapting the law to the prevailing demand. Instead of nine or ten years' course, as in the lycées for boys, five years are assigned in the case of girls, and this term is virtually shortened by the examination allowed at the end of the third year, which secures a "certificate of secondary studies." Colleges for girls have been opened at Grenoble, Auxerre, and Lons-le-Saunier, and lycées at Montpellier and Rouen. The three colleges numbered last July 346 scholars, and the lycée of Montpellier 96. The lycée of Rouen was inaugurated Oct. 1. Minister Duvaux made the address. In accordance with a report by Minister Duvaux, President Grévy issued a decree Oct. 10 establishing a scholastic council in each of the lycées of the Republic. This council, consisting of the chief of the institution and a representative of each of the faculties, will decide upon the courses and the conduct of the studies.

RUSSIA.—*Elementary Schools.—Gymnasia.—Universities.*—Russia has a national system of education, established by Alexander I. in 1802. The scheme divides the whole country into districts, each of which is to be provided with a university, several training schools (viz., classical gymnasia, commercial schools, schools of science, and schools for the army and navy), and elementary schools for the peasants. It is a highly centralized system, superintended by a Minister of Instruction, under whom is a Popecheetil, or curator, for each district. The latter officer has the sole power of nominating teachers and professors, and of granting or withdrawing licenses from schools. Under him are two inspectors, one for the boys' school, the other for the girls'. The scheme reads well, and might lead to the inference that all classes in Russia have fair school advantages. In truth, only a few districts have been organized in connection with the universities, and even in these few elementary schools have been opened. Under the authority of the St. Petersburg officials there are 126 common schools, of which 2 are in the city. For the most they are poorly housed, and destitute of all comforts and conveniences. Five hours daily session, with ten minutes recess, is the rule. Saturday sessions are shorter. In other provinces the condition of elementary schools is much more deplorable. While popular education is thus undeveloped, institutions of intermediate and superior grade are well organized.

Boys prepare for the gymnasia at home or in preparatory schools, and at the age of 7 years are admitted upon a nominal examination in reading, writing, arithmetic, geography, religion, and choral singing. The gymnasia are exactly alike throughout the empire, even to the uniforms of masters and pupils. The course is divided into eight classes, each of which is supposed to correspond to one year; but as a rigid examination decides the yearly promotion, the majority of pupils spend from 10 to 13 years in the course. The tuition fee at the gymnasia amounts to 25 roubles (about $15 per annum) for the studies required by the examinations. Music, drawing, dancing, etc., are extras. Small as the fee is, any person may obtain the gymnasial education gratis, if his parents be too poor to bear the expense.

From the gymnasiá the student passes to the University. The Russians have gymnasià for girls, in which the curriculum is similar to that of the boys' schools, save that Latin and Greek are excluded, while both French and German are obligatory. Each class in the girls' gymnasia is presided over by a lady called the "Dame de Classé," who maintains discipline, leaving instruction to the professors. The Institutes for girls differ from the gymnasia in that the girls are mostly boarders, and are training for governesses. The public teacher in Russia is a government officer of equal importance with those in the army, navy, or diplomatic corps. No person may become a teacher without having passed an examination by which either a certificate or diploma is secured. Studies, text-books, etc., are rigidly prescribed by law.

A series of examinations as to color-blindness have recently been made by Russian physicians, with results similar to those obtained in other countries. The defect is made less common among women than among men. Dr. Kollie discovered among men 2.5 per cent. of color-blind and 7.5 with imperfect vision, among women 0.16 per cent. of color-blind and 3 per cent. with imperfect vision.

The number of students in the University of Moscow for 1881 is reported as 2,430. As in all other Universities of Russia, the faculty of medicine had the largest attendance; viz., 1,397.

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MAR 14 1883

EDUCATION.

No. IV.—March, 1883.

THE HIGH SCHOOL IN OUR SYSTEM OF EDUCATION.

BY JOHN O. NORRIS, B.S.,
Master of the East Boston (Mass.) High School.

Should the High School have any place in our system of free public schools?

At the bidding of Dennis Kearney and his associates, the great State of California answers, No. Many men of property, and local politicians without property, have answered in the negative. Some men, who boast of being self-made, and thus relieve the Creator of a great responsibility, return a negative answer. The kind-hearted philanthropist, firmly convinced that educating other people's children out of their environment is a great calamity, answers in the negative, and immediately proceeds to write an article for the Sunday paper on the crime of over-education.

In addition to these men, there are others that really wish to answer in the negative, but do not feel quite sure that such an answer will be popular, and, consequently, like most trimmers, they *doubt.* They doubt the policy of extending the State system so far. They believe in popular education, and stoutly maintain that it is the palladium of liberty, etc., but they doubt the wisdom and expediency of carrying it beyond what is necessary in daily life. Newspapers also speak of common schools in language which shows that the writers do not include the high school as a part of the common school system.

These facts, familiar to us all, show that this is a question that must be met. As teachers we must meet it. It is of no use to say, "This question was settled in colonial times, or in the Constitution, or in the School-law of 1826, or in the days of Horace Mann, the renaissance of education." Nothing is settled in a State like ours, unless it rests on the confidence of the people; and so long as indifference concerning an institution exists, so long as active opposition to it lives, so long must that institution be a subject for discussion, and so long must its friends endeavor to remove the indifference, and silence the opposition, or show that it rests on a weak or dangerous foundation.

Can it be shown that the State has made a mistake, that it should limit the studies of its free schools to those commonly known as grammar-school studies? If this can be done, we should accept and support this conclusion.

It must not be forgotten, however, that this system dates from early colonial days. In 1647, less than twenty years from the date of their first charter, the people of Massachusetts, by the General Court, passed a law beginning as follows:

> 'It being one chief project of Satan to keep men from the knowledge of the Scripture, as in former times keeping them in unknown tongues, so in these latter times, by persuading from the use of tongues, that so at least the true sense and meaning of the original might be clouded and corrupted with false glosses of deceivers; to the end that learning may not be buried in the graves of our forefathers in Church and Common Wealth, the Lord assisting our endeavors. It is therefore ordered by this Court and the authority thereof," etc.

Then followed two sections. The *first* provided for a school, to give instruction in reading and writing, in every town numbering fifty householders. The second section ordered, "that where any town shall increase to the number of one hundred families, they shall set up a grammar-school, the master thereof being able to instruct youth so far as they may be fitted for the University." To insure the object of this section, it was enacted, "If any town neglect the performance hereof above one year, then every such town shall pay five pounds per annum to the next such school, till they shall perform this order;" and this penalty was afterward increased to ten, and later to twenty pounds.

The histories of the old towns of the State show that this law was enforced. Our State Constitution merely repeats the ideas of this act as follows: "It shall be the duty of legislatures to cherish the interests of literature, etc., especially the University at Cambridge, public schools, and grammar schools in the towns."

Here, then, is an institution that has lived almost two and a half centuries. This fact is a strong presumption in its favor, and throws on those who attack it the burden of proof. They ought to show conclusively that it is not a benefit to the State, and does not supply the need felt in former days. This has not been done, but a variety of assertions, opinions, and propositions have been advanced, some of which it may be well to consider.

[From one of the best known educational publications in New England.]

TWELVE PROPOSITIONS ON THE RELATIONS OF THE STATE TO HIGHER EDUCATION, BY DR. ROBINS, OF CANADA.

1. The good of the Commonwealth alone justifies the interference of the State with education.
2. It is for the good of the Commonwealth that such an education, as every boy and girl of twelve or fourteen years of age should have, be within the reach of every child within the State.
3. Two classes within the State must now be distinguished,—those who toil, and those who direct the toilers.
4. Those who direct the toilers are either those who possess extraordinary natural ability, or those who have inherited an assured possession.
5. It is not for the good of the Commonwealth that the school-life of the masses should be much prolonged, for while nature is yet plastic they must acquire the manual dexterity and the habits of patient, persevering labor, which are essential to their happiness and their success.
6. It is for the good of the Commonwealth that the leaders of society should have a more liberal, more thorough culture, and so a much more prolonged course of education. This is what is meant by "higher education."
7. In such an education only the few can participate,—want of talent, want of time, want of means forbid it.
8. Every child has an equal right to share in the advantages of the common education provided by the State, but it is not just that the State should make public provision to secure for a class advantages that cannot be shared by all.
9. The child of the rich has a just claim that the State shall expend on his education as much as on that of the child of the poor man, but no more.
10. Whatsoever, therefore, the education of the child of the rich man, whether from its superior character or from its longer duration, costs more than the education of the poor man, must in justice be borne by the rich man himself.
11. But when the child of the poor man gives evidence of character and intellect so superior that he will hereafter be a leader of men, it is for the good of the Commonwealth to see that he shall have, at the public cost if necessary, an education that shall soften his manners and ennoble his mind.

12. It is the interest of the State, then, to establish and maintain in centers of population a system of superior schools, subsidized by the State funds to the same extent as the elementary schools, but mainly supported by fees, open to all who pay the cost, and at the cost of the State to such as give evidence of extraordinary talent.

These propositions assume that the higher education is mainly for a class, the rich. Some time ago a writer in the *Boston Daily Advertiser* spoke of our high schools as follows: "The great mass cannot afford to send their children at all, though they pay for the support of the schools." I have heard the assertion flatly made that the high school was supported by the State for the advantage of people who ought to pay for the education of their children. Is this true?

Some years ago the Superintendent of Schools in Worcester took up this charge, as far as one high school was concerned, and proved it false. I have added to his figures those for the high schools of Melrose, Medford, Stoneham, and East Boston. The number of pupils is over 1,000, and the towns and cities offer a fair average for the high schools of the State. About twenty-five per cent. of the pupils are the children of parents that only pay a poll-tax, or none at all; sixty-four per cent. are children of parents taxed for $3,000 or less; between seventy-four and seventy-five per cent. have parents that are taxed for less than $5,000; and but thirteen and a half per cent. of the parents pay a tax on more than $10,000. Does this prove that the high school is the school of the rich? Is it not rather the school of the poor, or at least of those who are worth but little besides the house that shelters them? The assertion, then, that in the high school the money of the poor man is paying for the education of the rich is defective in this one respect,—it isn't true.

In opposition to this false assertion, the truer one that the property of the rich is taxed to educate the poor man's child in the high school, is sometimes given as a reason against it. Even so high an authority as Professor Sumner takes the ground that the man of property that sends no chilldren to the high school should not be compelled to contribute to its support. This conclusion is based on the ground that the high school is not an advantage to the State; for if it is admitted to *be* an advantage, it must stand on the same footing as other State institutions; if it can be shown to be of *no* advantage, the argument that it bears unequally on people is not needed; and, admitting that it bears *une-*

qually, does *not* prove it to be of no advantage; consequently, this argument, if it proves anything, proves too much.

What it asserts in regard to high schools is true of all other schools. If the State were to accept it as a principle, all corporations would be freed from the payment of a school-tax, as would all persons having no children in public schools, and the public schools would die of starvation. The principle might extend to other public expenses, and blind men might ask to be exempted from taxation for lighting streets; and, possibly, some mean-spirited individual might object to being taxed to maintain lunatic asylums or houses of correction, because none of his family were inmates.

The self-made man objects to the high school. Not Henry Wilson, not Abraham Lincoln, nor the hundreds like them, whose careers have been alike honorable to themselves and glorious to their country; for such men have always been ardent supporters of the fullest and broadest education for the whole people. Unfortunately there are two other classes of self-made men; first, those that have become rich but have remained ignorant, whose standard may be called the Plutonian standard. Mr. Anthracite Ironsides, for example, begins his career as a blacksmith's apprentice. He works hard, saves his money, never takes a holiday, dickers in watches with the young men of the town, and is soon spoken of by the knowing as a very *smart* young man. He starts in business for himself, and in a few years is at the head of a large forging establishment. He is a successful man, and is becoming a capitalist. He combines with others in a company to purchase and work iron and coal mines. His youthful shrewdness has crystallized into an unscrupulous and unrelenting selfishness that sets aside all principles of equity, and this enables him to obtain control of a majority of the company's stock. Mr. Ironsides is a coal and iron magnate. His horizon is bounded by coal and iron, and his firmament is tinted with the green and gold of greenbacks and eagles. His argument against higher education is himself. He points to his portly figure in the mirror, and says, "Mr. Ironsides, I congratulate you. You are a truly successful man. Where are your youthful companions, who were in the high school and the college when you were in the blacksmith's shop? Which of them can point to such evidences of practical success as these? Most of them are school-masters, ministers, architects, or engineers, with now and then a 'literary feller,'—good fellows, but no capital. I could buy the whole lot with what I made on that last rise in iron."

Thus soliloquizes Mr. Anthracite Ironsides, and concludes that higher education is of no advantage, that the State should not indulge in such an expensive and useless folly. He does not for a moment consider that such success as his is exceptional,—the lot of but *one* in thousands. He does not realize that the exercise of his natural abilities, aided and improved by education, would have brought a far higher quality of success. He has not learned what the *Spectator* had found out nearly two hundred years ago. In the Golden Scales, "notwithstanding the weight of natural parts was much heavier than that of teaching, I observed that it weighed a hundred times heavier than it did before, when I put learning in the same scale with it."

The third class of self-made men have overcome neither poverty nor ignorance, but have a *gift*, which, in their own estimation, entitles them to a hearing; this gift our grandmother used to call the "gift of gab." The motto of these men seems to be "*Vox et præterea nihil*,"—it *ought* to be "*Vox clamantis in deserto.*" These men need no attention, except the passing remark that, to thoughtful people, their clamor against the high school is a convincing argument in its favor. Joining hands with these vociferous demagogues in a crusade against the higher education, stand men that one would not expect to find there; men of culture,—not all, not the majority, but too many. Their objection rests on the ground that only those that are to be the leaders in affairs need the higher education. This is the attitude of some of our College professors, of some social reformers, of some men that move in the upper circles of society.

Not long ago, the great Independent Journal of New England, in an elaborate editorial, presented the views of this class so pointedly, that it may be well to consider them for a short time. I will quote some passages which give the idea of the whole article, and I only wish I had time to give the whole:

> "Is it wise or best to educate our children beyond the position which the vast majority of them must always occupy? Is not the one great crime in our educational system the fallacy, that education is to confer in some blind way an unexpected opportunity upon one and lift him into exceptional positions? . . . . It is safe to ask what was done before people reached the insane idea that every child was to be educated beyond the studies of the common school, if the parents desired? . . . . What is the use of a good part of our secondary education when it hampers the instincts to self-help, which ought to be as common to-day as they ever were? . . . . What is the use, if your boy is not exceptionally bright, to attempt to fit him for college or business on any large plan? . . . . Are not the ideas of our children altogether beyond the possibilities of life?"

Speaking of the drift of "representative schools" in Boston and Quincy, the writer says:

> "None of the boys, none of the girls expected to really work for a living. They were aiming at something beyond and above their social rank and condition. . . . . It is a hard pass that we have come to in our purpose to give the youth of our time increased educational privileges. We have educated them out of their circumstances, beyond and above their plain duties, in a way to unfit them for honest labor, and without the preparations in character for the higher grades of service."

The whole article is full of this idea of over-education. It deliberately charges that our educational system is filling children with ideas, making them unwilling to labor; and, in short, is preparing them for a life of discontent and misery.

Some time after, another editorial appeared in the same journal on the same subject. This article begins by quoting from another prominent journal the following remark:

> "It is noticeable that the Independent Journal goes to the very root of the matter, and asserts that we are doing the rising generation an irreparable wrong. It is asserted that the inevitable result of what is called higher education of the pupils is to unfit them for the duties they ought to perform without enabling them to attain the positions they are educated to seek. Discussion and theory aside, has experience as yet shown that the Independent Journal has ground for its opinions?"

This shows us how this editorial was understood, and what the Independent Journal was called upon to do. Its reply was as follows:

> "The question is rightly asked, and there is no trouble in answering it. But before it is answered, it is worth while to look at our education as a whole, from the social point of view. The American principle is, that every one shall have a chance to make the most of himself. The parent has felt this as the spur to his own early manhood, and his children are brought up in this atmosphere. This, as a general principle, is not to be discouraged. In communities where there is no aristocracy of blood there must be the aristocracy of merit. This is the American title to superiority. The free school system is established expressly to carry out this idea in American society and life."

And yet, according to the first editorial, by carrying out this idea for which it was "expressly established," the system is doing the rising generation an "irreparable wrong." I wish the Independent

Journal would tell us by which of these statements it means to stand. If by the second, we have no use for the first. The second stands on the true ground, and has well said that this is the American idea. It is the idea of progress everywhere, and to abandon it would mean to turn our backs on one of the most desirable motives to human effort and advancement,—a wholesome discontent with one's present. Let us see, now, how experience proves the statements in the first editorial. I quote from the second again:

> "And yet the education is not satisfactory, because the schools do not turn out pupils with a training that helps to grapple with the difficulties of practical life. It may be said that too much is expected when the average capacity is duly considered, but the reply is that unless pupils of average capacity are helped by their education in earning their bread, unless their school training makes them more effective, intelligent, and conscientious citizens than they would be otherwise, the chief object of education has not been attained; it is the failure of our educational system at this vital point that is awakening attention and alarming society."

This is the evidence of experience,—whose experience, the writer does not say. He merely states that this is what experience testifies, and expects the community to take his word for it. I feel very much like asking the question which the skeptical boy asked the schoolmaster about the letter *A*: "How do you know it 's *A*?" "Why, my teacher told me." "How did he know?" "His teacher told him, I suppose." "How do you know but what he lied?" calmly asked the boy.

As I understand this, if it means anything, it means that our system of education has not helped pupils of "average capacity" to be more effective, intelligent, and conscientious than they would be otherwise. Those familiar with the subject, and competent to judge, tell us that the system at present is superior to that of the past. Have not a majority of the present generation been trained by this system of education? Did not most of the men and women who are "grappling with the difficulties of practical life" receive their training in our common schools ten, twenty, thirty or forty years ago? Do they not act as effectively, as intelligently, and as conscientiously as those trained by any system yet invented?

We must judge of the future by the past; and if the system of the past has produced a population noted throughout the country for intelligence and moral worth, what reason is there for the assertion that the better system of the present is not obtaining like results?

But there is more evidence by which experience proves over-education; our writer goes on:

> "But it is time to go into particulars. One is the crowding of too much into the course of study . . . . Boston schools are so loaded down with a little of everything, that the average children are not able to reach the end of the course of study in the grammar-schools before they are required to go out to labor, and consequently they are sent forth imperfectly instructed in the things they most ought to know. . . . . . What is true of Boston schools is probably true of other schools. . . . . . And, partly growing out of the crowding, the course of a study is a difficulty for which the teachers are not wholly responsible. It is the want of personal education. Our present system, under these two heads, inflicts upon the community some of the worst evils that exist under heaven."

I am afraid this is becoming confusing; but I had an impression that the writer was attempting to prove that what is called higher education was "unfitting pupils for the duties they ought to perform," because it educated them "above and beyond their plain duties," and his proof now seems to be that average boys and girls have to go to work before they have received this education, and consequently they are injured by it. That is, the higher education is ruining our children because they don't get it. How asserting that average children are sent out of school "imperfectly instructed in what they most ought to know," substantiates the charge of over-education is a mystery.

The conclusion of the article is remarkable. I will quote two or three sentences:

> "In every direction you find persons whose education has been of the quality that has unfitted them for the work God intended them to do. They cannot do the work of the few; they are trained just above the work of the many; and they are unwilling to accept what they can do best. An education that leads to this result is a crime against society, and a crime against the individual."

The average man would like some statistics as to the number of such persons, as to their previous history, and on various other interesting points before coming to a sweeping conclusion; but this writer evidently is a seer; he is hampered by no restraints; with a genuine modesty and lack of self-consciousness that proves true inspiration, he is prepared to announce just what the Almighty intended a man for, and to settle at sight all questions of environment. Great as is this boon to so many waiting mortals, to others it must be a harbinger of disappointment. To one of those comfortable persons who imagines himself pretty well suited to his occupation, and who hugs the fond delusion that everything is to go on smoothly in the future, how startling it must be to hear that judicial voice in measured and monotonous tones pronounce the sentence,—"God did not intend you for that position; you are one of the many,—why try to be one of the few? You are *a misfit;*" and thus ruthlessly are demolished his satisfactions in the present and his anticipations for the future.

There are strong objections to this idea that a few children should be selected for the higher education, and that it should be refused to the mass. I can only mention a few. I will not go into the discussion of the embarrassments and mistakes that would arise in trying to make a selection, though a strong argument against the plan might be made on that ground. The first objection is this: In a group of children, nobody can tell who are destined to become leaders. To do this would require a greater seer than the one we have spoken of.

In this matter, I agree with the Boston policeman who was stationed at the entrance to a new English steamer, in order to superintend the admission of visitors. There was great curiosity to see the vessel, and a large and somewhat noisy crowd was awaiting the signal to enter. The steamer's officers were in dismay, and, turning to the officer, said: "We can't have all these people on board. You may let gentlemen come on, but no others." "I shall be glad to do so," replied the officer, "if one of you will stand here and pick out gentlemen. I can't take the responsibility of notifying anybody that he isn't a gentleman."

Who dares to take the responsibility to stand by the door of the high school, and say, "You were not destined to be a leader in this world; you must not come in." Whenever this shall be done, the voice of the people will be heard saying, "This is our school, and it must have no tests for admission that any reasonably intelligent child cannot pass.

Another objection to this theory of education lies in its opposition to all our ideas and practices. Toilers and leaders are separated by no boundary-line, carefully drawn, but so graduate themselves from one to the other, that, in a majority of instances, it would be incorrect to say of a leading man, "He has never been a toiler."

There is one other objection to this idea that has great weight with me, and I am quite sure it will with my readers. I often ask myself this question: "What would have been the effect in your own case had this view of education prevailed? Is it probable that you would have been considered promising enough to receive the training of a leader?" And, in candor, I am obliged to answer, "*That* is extremely doubtful; all the probabilities, in fact, are against it." And this answer is emphasized by the remembrance of some rather sneering remarks by some friends of the family, apropos to a college education, like the following, "There's so-and-so, who has been to college, tending a toll-gate;" the inference being obvious. Had my father been influenced by this (and every day of my life I thank God that he was not), I have little doubt that I should still be working at the shoemaker's bench, like many who were my schoolmates; and had this doctrine of exclusion been applied to you, my readers I venture to affirm that many of you would now be carrying on a little country farm, or working at a trade.

There is one trouble about the theory of exclusion; viz., men apply it to other people's children, but not to their own; and the other people are apt to think that they themselves can judge for their own children; and thus, fortunately, the exclusion theory makes less headway than it otherwise would. Space will not permit us to dwell longer on this part of the subject.

THE PLACE OF THE HIGH SCHOOL IN OUR SYSTEM OF EDUCATION.

Let us next consider the proper place of the high school in our system,—I mean with reference to the other parts of the system, the primary and grammar schools. If this system is to be a unit, there should be no decided break anywhere in it; the high school should stand in as close relations to the grammar school as that does to the primary school. The transition from the primary to the grammar school is natural and easy; so it is from one class in the grammar school to the next above; but at the end of the grammar-school course this is not so. Here there seems to be a way-station, a change of cars, and quite often many travelers conclude to give up the journey at this point, while those that go on really consider that they are starting on a new journey. In the city of Boston, not over half of those that complete the grammar-school course go on to the high school. The majority of those that do not continue, feel too old to attend school longer, or wish to be earning money; only a comparatively small number are obliged to remain at home on account of poverty. I presume other high schools suffer in the same respects.

This seems to be due to two causes: First, is the idea that the grammar-school course gives a good education, and that, having finished that, one is fully prepared for all the practical duties of life. This leads many to the conclusion that the high-school studies are mainly ornamental,—well enough for those that can afford the time and money, but having no market value. The second is this: For some time it has been the custom in New England to act on the principle that the majority of our children end their education with the grammar-school. In the last year of the grammar-school course, therefore, it has been thought wise to place several special studies, in order to give pupils that are going out of school an opportunity to learn many useful and important things. For example, some or all of the following subjects: Physiology, Natural Philosophy, Book keeping, Square and Cube-root, and the applications of Geometry in arithmetic, come in this year; and in Boston, English History is added. This plan results in detaining pupils in the grammar school until the age of fifteen or sixteen years, and causes them to feel that, after three or four years more in school, they will be too old to find good opportunities for entering business, consequently they put aside the high-school course of study.

Now all this in our system seems a mistake. We ought to recognize the facts of the case, and the facts are these: Of the pupils that enter the grammar-schools any year, not over one-fourth reach the last year of the course (I am speaking more particularly of Boston; I presume it is so in other cities). These studies, then, come too late for the majority of grammar-school pupils, and the plan does not accomplish its implied purpose. Again, of the one-fourth that take the last year of the grammar-school, about one-half or more go on to the high school, and for them these studies are of no great advantage, as they are the regular studies in most high schools.

This plan, then, for the sake of giving to one-eighth of the pupils a little knowledge of these subjects, detains a number of pupils a year longer than is necessary, and often turns the scale against the high school. Instead of this plan would it not be wiser to drop entirely the idea that the grammar-school is a finishing school, and adopt a plan that should consider our system as a unit, beginning at the primary and ending with the high school,—one that makes no provision for leaving at any point on the journey, but which, in its arrangement of studies, recognizes the fact that many will drop out in the first four or five years of the course? By such a plan, it seems to me, pupils might enter the high school at the age of fourteen or thirteen and a half, and complete the course at an age suitable for beginning business, or for learning a trade. At all events, some plan should be adopted by which those pupils that propose to attend the high school may be relieved from all this unnecessary work. Until something of this kind can be done, and more pupils be induced to enter the high school, it will not occupy its true place with reference to other parts of the system.

For the last few years the increase in attendance on high schools has hardly kept pace with the increase in population, and offers a striking contrast to the progress between 1850 and 1875. In 1852 there were sixty-four high schools in the State, while in 1875 the number was 212. In the last report of the Secretary of the Board of Education, the number is given as 215. Unfortunately, no record of the number of pupils was made, separately, until 1875, when there were 15,826; three years later the number was 19,311, and in the last report it was given as 18,900. This shows that the high schools have not gained in numbers for the last few years, but have gone backward a little. Here, then, is room to work; and I believe one of our most important duties as teachers is a united effort to increase the attendance in our high schools. The cities offer the best field for reform in this matter, as the following table shows, giving the number of inhabitants for every pupil in the high school:

CITIES.

Fitchburg,	1	pupil to	every	51	inhabitants.
Malden,	1	“	“	61	“
Somerville,	1	“	“	74	“
Springfield,	1	“	“	78	“
Worcester,	1	“	“	88	“
Newburyport,	1	“	“	96	“
Cambridge,	1	“	“	104	“
Lowell, Chelsea,	1	“	“	121	“
New Bedford,	1	“	“	112	“
Haverhill,	1	“	“	116	“
Taunton,	1	“	“	126	“
Fall River,	1	“	“	143	“
Salem,	1	“	“	168	“
Boston,	1	“	“	173	“
Lynn,	1	“	“	182	“
Lawrence,	1	“	“	200	“

TOWNS TAKEN AT RANDOM.

Newton,	1	pupil to	every	60	inhabitants.
Lancaster,	1	“	“	36	“
Milford,	1	“	“	50	“
Melrose,	1	“	“	50	“
Canton,	1	“	“	63	“
Reading,	1	“	“	30	“

This means that the people of our towns, who go to the town-meetings, vote their own appropriations, and manage their own affairs, take from four to six times the interest in the higher education of their children that the people of some of our cities manifest. Yet surprise is expressed that so many leading men in our cities come from the country. They ought to, for there great pains are taken to raise a good crop. I repeat, the cities are the points in which to increase the attendance in the high schools. I have spoken of one method that I believe will aid in this, but there is another influence stronger and better than all others combined, and of that I wish to speak for a moment,—I mean the influence of the principals of grammar schools. I speak with knowledge on this point. I had the good fortune to begin my work in Boston under Mr. Joshua Bates, of the Brimmer School, and I remember well the pride with which he was accustomed to allude to the long list of Brimmer boys that used to enter the high school every year. He made it his business to talk the matter over with the boys during their last year, and always urged them to go to the high school; the result was that a large number always entered, and some years nearly every graduate did so.

I can tell of a school that our president knows something about, that for years sent very few boys to the high school. The boys were believed to belong to a class that could not afford to attend the high school, and which the high school could do little for. After a new principal was appointed, it occurred to him that it would be a good thing for that school, if more boys were sent from it to the high school; he believed it would benefit the boys that did not go, even; he began to work, and in two years, instead of five boys, there appeared twenty-five or thirty, to take the examination for entrance to the high school.

The first year of the East Boston High School, forty-five pupils entered from the grammar-schools; this year sixty-five pupils entered from the same grammar schools, an increase of over forty-four per cent in four years; and this, I believe, is due to the influence of the grammar-school teachers, more than to any other cause. The principals and their first assistants work for the high school; they will even look up pupils that do not enter and sometimes urge them to come in. I have in mind particularly one lady (a teacher) who persuaded three girls to enter the high school this year.

This is the aid on which the high schools must rely. I mention this with confidence because all writers on education agree that good secondary schools are an advantage to those below them. It is, therefore, a matter of self-interest for grammar-school teachers to aid the high school.

Mr. Dickinson says the high schools "stimulate into greater efficiency all the schools below them." "It is said that the elementary schools of Germany are the best in the world, because the higher schools are open to all classes."

Prest. Pickard says, "Every child in the lower schools feels the influence of the higher, and in striving after that which may be only a possibility to him, he enlarges and strengthens his actual attainments."

Another writer speaks thus: "Perhaps the influence of the high school upon the lower schools is exerted most powerfully in providing for them a class of teachers of a higher grade of qualifications than it was possible to secure under the former order of things."

There is one other view to be taken of this relation between the high school and lower schools. A decay in the high school means an increase of private schools; and an increase of private schools means a neglect of public schools of all grades.

In 1837 there were in Massachusetts forty-three towns that should have supported a high school. As a matter of fact, twenty-nine of these did not do so, but maintained private schools; and in these twenty-nine towns, the most populous and flourishing of the State, only about three-fourths as much money was raised by taxation for each pupil of school age as was raised in the other towns of the State. The result Mr. Mann expresses thus in his report: "I have been repeatedly assured that, in populous villages and central districts, where there is naturally a concentration of wealth and intelligence and a juster appreciation of the blessings of a good education, and where, therefore, the common school ought to be the best in town, it was the poorest."

This all shows clearly that these parts of one system are mutually dependent; the high school is dependent on the grammar-school for a good attendance; the grammar on the high school for stimulation. Let us recognize this fact, and work together for good.

THE RELATION OF HIGH SCHOOLS TO SOCIETY.

The relation of the high school to society might well occupy the space of another article; but I will touch but a point here and there:

(1). It furnishes, free to all, a better training in Science, Modern Languages, English Language, and History than do some of our Colleges, and it far surpasses in these respects the colleges of fifty years ago. In instruction in Mathematics and Classics it equals most of the colleges of fifty years ago. It stands as the people's college, its doors are open to the poorest child, and its bounty is bestowed, like the gifts of God, irrespective of persons.

(2). We have seen that it is patronized by people that could not pay for their children's tuition and board at a private school; and, therefore, it increases the number of educated persons in a community, and thus is a centre of intellectual life. Prof. Laurie, of the University of Edinburgh, is good authority on this point; he speaks of Scotland in these words: "Weak as the secondary school system of Scotland now is, it was not always so: the present circumstances of our country recall us to the national duty of doing what we can to restore and preserve the learning of Scotland under new and suitable forms. This can be done mainly by the revival of our high schools, and by the promotion of secondary education in every form, in accordance with the traditions of the past; not because they are traditions, but simply because the system which these traditions hand down has been found to turn out a larger proportion of well-instructed, well-disciplined, and capable Scotchmen for the service of the country than any other that could have been devised."

(3). The high school is a benefit to society because it has a tendency to make our people more homogeneous and less clannish. But for the high school, the higher education, and perhaps, eventually, all education, would naturally be provided for by sectarian schools, and those differences that separate good people would be broadened. In the judgment of many wise men there is too much of this already. They want to see our people brought together, and to remove all distinctions that tend to create classes, or to isolate any portion of a community from the rest.

(4). The high school is also a benefit to society because it trains children of all conditions to recognize the American idea, that the only title to superiority is that arising from personal exertion or nobility of character. The daily encounters with their fellow-students in the field of study, as well as on the play-ground, are the very elements of a training in self-reliance and in a proper respect for others; a training that will be likely to "establish such relations among all the children as will prepare them for their common destiny when men."

(5). This is not all. While other systems tend to produce feelings of superiority in the minds of a small number of persons; while, in a few, they foster a pride of wealth and position; in the minds of the great mass they are apt to create a jealousy of the small educated class, and a feeling that there are no common interests between the two. This is particularly unfortunate when one remembers that the educated minority must "receive good or suffer evil from social institutions which the majority will mould according to its own will." With the high-school system this can never happen, for the mass of the people know that its privileges are free to them; and, in fact, are especially for them. In closing, I will quote a few words from Prof. Laurie on this point:

> "For the intellectual needs of the State, we require to draw forth the best intellects of the community. Nor is this all; for what shall we say of the inherent rights of the finer brains? Is that clever boy, the son of a poor farmer or of a village smith or carpenter, whose spirit is touched to a finer issue than ploughing or sowing, to be told that the State has so arranged the educational machinery of the country that he is doomed to be a hewer of wood and a drawer of water? I ask the *politician*, Is this safe for the State? I ask the "Liberal" newspaper, Is there any liberalism in this? I ask the Democracy, Where is the true democracy to be found, if not in the recognition of the just claims of each individual son of the soil? I ask those who tremble before the secret and assured advance of communism, by what counter-theory can they hope to meet it and destroy it, save by the theory of *individualism*, which involves a free and open field for the intellect of those who have been born poor?"

WHAT IS EDUCATION?

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Education embraces in its scope all human relations and obligations, all the possibilities of human activity. It is the product of the combined influences of the family, the school, the Church, and the State. It, in turn, determines the quality of domestic, social, religious, and public life, and prepares a man for his duties as an individual, as a member of the family, of the community, and of the race.

A sound theory is the guide of successful practice in education as in every other department of human effort. Theory is often regarded as mere conjecture, or fanciful speculation, and as opposed to practice. And practice, as the mere repetition of acts, regardless of their quality, and having the magical power to make the performer perfect in his work.

As defined by Hamilton, "practice is the exercise of an art, or the application of a science, in life; which application is itself an art, for it is not every one who is able to apply all he knows; there being required, over and above knowledge, a certain dexterity and skill." "Theory is the knowledge of the principles by which practice accomplishes its end."

"There is no practice without a theory," for every man, to some extent, thinks of what he is doing. The more capable and thoughtful he is, the more fully he reflects upon what he has done, the more carefully he considers what he is to perform; as he proceeds in his practice and reflects upon his performance, his theory acquires distinctness and becomes the guide of his practice.

Theory is dependent upon practice. We acquire knowledge of the action of both physical and mental forces, by observing individual instances of the action of the force; then, by reflection upon these facts, we derive the principles of their action; by further reflection upon these principles, we arrange them in the order of their dependence, and form the theory, which is the generalization of the principles upon which the practice proceeds.

Theory and practice are not opposed, but are complements of each other. Each requires the other. The theory of education includes a clear apprehension of the end to be sought in education, and a comprehensive knowledge of the means of attaining this end. The practice includes the skillful use of these means in the accomplishment of this end.

The question before us is fundamental and pertinent, for the many popular misconceptions concerning the end and objects of education are a serious hindrance to progress in educational work.

The question can be answered intelligently only by the study of the nature of the human being to ascertain what he is, to what end he should live, and the means of attaining this end.

What is the human being who is to be educated? He is a person, not a thing. He is a free, self-active rational being; not a machine for the manufacture of cloth, shoes, nails or pins. He has a physical and a rational nature. His body is the product of all the physical and vital forces, "the most exquisite and wonderful organization which has come to us from the Divine hand." It is the medium for the communication of his thought and feeling, the instrument of his will, "the *temple* of the Holy Spirit which is in him, which he has of God." "It is a study for his whole life." Man is a part of the material world. He is a child of nature.

A sound body is the condition for a sound mind. The development and perfection of the body is to be secured for the sake of the higher development of the mind.

Man enters upon life one of the most helpless of all creatures, entirely dependent for what he shall have, and what he shall become, upon the power, care, and guidance of others. He is born into society, and while he must stand or fall as an individual, he is placed in such a relation to his fellows that he cannot grow as a man out of society. "It is there alone his faculties, expanded in full vigor, shine out; there only reach their proper use." He is the child of man as well as the child of nature.

The highest fact of his nature is, that he is endowed with that rational life which allies him to the Infinite mind, and gives him power, when he has gained command of himself, to comprehend and control all that is below him. His mind "is made in the image and after the likeness of God." He is self-active, encircling the globe in his thought and action, studying its structure and the history of that structure in the stony pages of its crust, and ranging through the starry realms of space with his extended vision. He reads the phenomena and laws of his own and other minds, and holds communion with the Father of his spirit. He is at once the child of nature, the child of man, and the child of God, "heir of all things, having the promise of the life that now is and of that which is to come." If he chooses to be a co-worker with God, he may grow to the stature of perfect manhood. If he chooses to follow the bent of selfish inclination, he may go down to destruction.

To see more definitely what the end of education should be, we need to observe the different powers of the mind. The mind can know. It knows the objects in the world of matter and of mind. The mind can feel, and its feeling is produced by its knowledge. The mind can choose, and the choosing is occasioned by feeling. We feel because we know, and we choose because of knowledge and feeling.

The mind, by repeatedly acting in a certain way, acquires a tendency to act in that way, or *a habit.*

Habits of some kind in thinking, feeling, and acting, are formed early, and exert a controlling influence upon the subsequent life.

The child has the power to perceive, by which, if cultivated, he acquires distinct ideas of individual objects, the correct expression of these ideas in spoken and written language, and the *habit* of observing every object which comes before his mind. If this power is not cultivated, he acquires only indefinite ideas of objects, a limited vocabulary, and the habit of neglecting his opportunities to observe.

He has the power to remember, which, rightly exercised, enables him to hold the knowledge he has acquired ready for use; or, uncultivated, leaves him with a meagre knowledge of the past, and the habit of forgetfulness.

He has the power to imagine, which, properly trained, forms ideals of excellence that constantly allure him to higher achievement; or, untrained, forms ideals which entice him to evil-doing.

He has the power to generalize, judge, and reason, by which, from the distinct ideas of objects acquired by perception and reproduced by memory, he forms ideas of classes of objects, judges of their relations; derives principles and general truths; discovers laws, sciences, and systems. By the cultivation of this power he acquires knowledge of the relations and causes of things, the ability to think logically, to think for himself, to express his thought effectively. If the cultivation of this power be neglected, he acquires but a limited knowledge of relations and causes, depends on others to think for him, and becomes a follower of other men.

The distinct ideas of individual objects acquired by the perceptive powers and reproduced by memory, are the material from which the imagination forms its ideals, from which the power of generalization forms general, abstract ideas or notions; and the relations of these notions are the material upon which the power to judge and reason is employed.

It thus appears that the cultivation of the perceptive powers is the condition for the cultivation of the memory and imagination, and the right training of all these is the condition for the cultivation of the reflective powers.

I have called attention to the intellectual powers, the order of their development, the conditions, and the products of their activity. It will be seen from this analysis that the thorough training of all the intellectual powers is indispensable to the best development and growth of the man.

Knowledge occasions feeling. Each form of intellectual activity is accompanied by its own feeling. In the sensibilities of the child are found the springs of his activity. They furnish the motives to choice and action. His appetites impel him to supply the wants of the body. His desires incite him to the upbuilding of the mind. His affections prompt him to act for the good of others. His moral sensibility makes him feel that he ought to do right, and refrain from doing wrong.

His natural impulses are powerful incentives; *used*, they secure his well-being; *abused*, they insure his destruction. They have no limit in themselves, and must be controlled by the will. No part of human nature needs more careful study than the sensibilities. No powers of the child need more careful cultivation. The sensibilities derive their importance from the fact that they move the will to choice.

The mind choosing is the will, the power by which the man is capable of free action. "By will it is that man is what he is." The feelings awakened by a knowledge of the objects of appetite, desire, or affection solicit the will. Conscience, "the oracle of God in man," stands always by to tell him what he ought to do; "bearing witness to his choice, his thoughts meanwhile accusing or else excusing one another." In this presence he chooses, either in accordance with, or in opposition to, the dictates of conscience. His choice determines the moral quality of his action; his character is what he is as the result of his own free choice and action.

The will is cultivated by cultivating the intellect, which enables the man to judge more wisely what ought to be done, by listening to the voice of conscience in regulating the natural impulses, and by resolving to do always what ought to be done.

The strength of the will is shown by self-control, especially by the control of the passions when they rise in opposition to conscience, and by controlling other minds.

The action of the will is conditioned upon the action of the intellect and the sensibility. The mind is the joint action of intellect, sensibility, and will. The culmination of man is "a completely-fashioned will."

We learn from the study of the mind what the mental powers are, the order of their development, the conditions and products of their activity.

The condition for the activity of the intellect is the presence of the proper object of thought; for the sensibility, the knowledge of this object; for the will, the feelings awakened by the knowledge of this object. The products of intellectual activity are knowledge, elementary and scientific, and intellectual skill; of the sensibilities, motives to choice, and the inclination to exert one's powers; of the will, choice with the exertion of energy and the increase of will-power. The product of all the powers is habits of thinking, feeling, acting,—*character.*

We learn further that the powers are interdependent. The highest intellectual activity is impossible, except the right emotions are enlisted in the work attempted, and the moral nature inspires and sanctions the effort. On the other hand, the moral nature cannot reach its highest development without the clear, keen perception and comprehension of the trained intellect, and the quickened sensibilities.

Still further, we learn that the highest development of the man requires that *all* his powers should be cultivated, that there should be unity and harmony in their action, and that he should concentrate all the energy of which he is capable in the exertion of each power.

"This harmonious balancing of all the forces which constitute the life of the soul is possible only as conscience reigns supreme over all the powers; only as God, and not self, is the supreme object of regard, "the centre about which all the activities turn."

To what end should every man live? What should he aim to be and to do? What does his nature require of him? Is it enough that he become a skilled instrument for the making of the seventh part of a pin, or the eighth part of a shoe, or the whole of a nail; or skilled in any other manual art, or in any special line of mental activity, by which he may secure for himself food, raiment, and shelter? He should be a skilled instrument in some calling, that he may be able to provide for the supply of all his wants. This is a necessity with most men.

The wants of the mind can be met only by the right exertion of all the powers. This exertion each person must make for himself.

Man is by his nature an end unto himself. The complete and harmonious development of all his powers is the end toward which he should strive. This is the only way in which he can satisfy his own nature, or show forth the glory of his Creator. Whatever be his vocation, he should follow it with such a purpose as to make it, as far as possible, a constant development of himself. By so doing, he will be steadily gaining command of the circumstances in which he lives, instead of these exerting a controlling influence upon his life.

What are the means of attaining this end? The right exertion of all the powers, physical and mental,—beginning with the life and continuing through life,—for the development of the human mind is an endless process. The body and mind work together in the development and growth of the child. Self-activity is the law of his growth. Every power grows by exercise.

We have seen that all the powers may be *used* for the elevation of the man, or may be *abused* for his degradation.

The right use of all the powers by the child, requires,—

That the proper objects of thought shall be presented as the occasion of his activity.

That his mind shall concentrate all its energy in the exercise of the powers,

That this exertion shall continue as long as his mind can act without a forced activity.

That the effort shall be repeated till there is clearness of apprehension and the right habit of action.

That those feelings shall be awakened which will determine his will to do what ought to be done.

That the effort to do what ought to be done shall be made more pleasurable than its omission.

"The spontaneous exertion of a power, if pleasurable, is continued on that account," and ends in increase of ability and inclination to use the power.

"What the child does himself, and loves to do, forms his habits of doing."

Let this kind of activity by the child grow with his growth and strengthen with his strength through childhood and youth, and he will be brought into that state in which he will be able and willing to carry on the work of development and growth for himself. This state is Education.

Education, as an end, is that state of the man in which he is able and willing to concentrate all his energy in the right use of all his powers.

Education, as a means, or the work of the educator, is to direct and control the activities of the child, by presenting the proper objects of thought to his mind, with such motives as will call his powers into spontaneous exertion in doing what he ought to do; and to require him to continue this exertion of his powers, until he reaches the state in which he is able and willing to concentrate all his energy in the right use of all his powers.

The best education possible is the birthright of every man, for the human race is composed of individual men, all made of one blood, and forming one great brotherhood.

The higher the education, the better the man is fitted to perform all the offices of life.

The man who can rule his own spirit, and who can use all his energy, in the harmonious exertion of all his powers, in all the various relations of his life, is the highest product of the combined action of divine and human agencies.

EDUCATION ON THE PACIFIC COAST.

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Before attempting to show how that which is needed is to be secured, a careful statement must be made of *what* is needed. This is all the more necessary, because the theory of mere secular education meets with more general acceptance on the Pacific slope than anywhere else, perhaps. A true view of the full culture demanded will ask sufficient delay, at the outset, to mark definitely the features of two inadequate theories, but claiming to be all-sufficient, and which, if accepted in place of the true, will prove an insuperable obstacle to a Christian civilization on the Pacific Coast.

The first of these may be called the *Scientific;* the second, the *Literary* theory. Herbert Spencer has been a leading advocate of the former; Matthew Arnold, of the latter.

What we call *nature* is a legitimate study, and very desirable. Natural science must be stretched so as to cover this whole realm, to embrace all that the scientific theory would include. The *facts* of the world of sense,—single facts, complex facts, classified facts, controlling facts,—which last we call laws, or laws of nature,—all are embraced. Here is a range of possibilities not easily exhausted. It needs a lifetime longer than that of Humboldt,—though four hours of sleep might suffice by night, as in his case,—coupled with a zeal and endurance greater than that of Agassiz, to place the myriad facts into a just classification. The controlling facts, or laws, involve the *methods* of the inorganic world and the processes of life in the organic; attraction and the effects thereof, near and remote; crystallization and its various forms; geology and the testimony of the rocks; chemistry and its combinations; electricity, magnetism, light; mechanics, and the forms of force; then, botany and the vegetable kingdom; zoology and the wonderful facts of the animal kingdom.

In its various features, nature is an interesting study; in itself considered, it is so; more, also, because of our relation to the world of sense and nature. Wherein science is practical and can be applied, its interest for us increases. Thus, after *discovery,*—that is, the finding of facts and laws not known before,—comes *invention;* that is, the putting of nature's possibilities to the service of man, the sewing-machine in the house, the reaper in the field, the railway for the nation and the land, the steamer for the nations and the water, the telegraph for all lands and nations, in spite of the oceans which lie between. And how many more there are, conducing, in a variety of ways, to the convenience, the pleasure, and the profit of the human race!

Let us say for this theory, that it would include in its round of studies such instruction as may seem fit for the *family* and the *state*, and what is thought will enable man to live best in his material and earthly relations. And what objection is to be made to this kind of education? *None whatever, when the study of nature is made a part only,* of what we *can* know and *need* to know. But when it is claimed that man *needs* no more, and is *capable* of no more than this, we have important objections to make. And when the *scientific theory,* as such, is spoken of, this is what we mean,—to know nature thoroughly, and to be in harmony with her, as the metes and bounds of human possibility. To such a theory, therefore, these objections may be urged:

First, it does not offer to man all he needs, or is capable of. We are, indeed, related to nature, and ought to know her: but we have a relation to what is beyond nature; wherefore, to assume that we have no possibility of knowing what is beyond and higher, is to assume a position whose consequences are of vast importance,—of which *some* intimation may be given as we go on.

Second, a theorizing not properly belonging to scientific study often, if not always, connects itself with this scheme. Let us understand, natural science *proper* deals with a system *already existing.* The facts, the laws, are in the system before we know them, in order that we may know them. Observation takes them up, generalization classifies them. But the theory, not content with what belongs to it properly, tries, from itself and by itself, to step beyond itself; and its attempts are generally very lame, as inadequate as to explain a suspended chain by its links, saying that it hangs in the air because one link supports another, taking no account of the staple at the top to which all are attached, and without which no links at all could be suspended. Very much so, when this theorizing attempts the origin of all things. Chemistry, indeed, combines two or more elements, and secures a compound with new properties, and it belongs to chemistry to *show* the *facts;* and so of all the sciences. It belongs to them properly to tell us what the known facts are. So much, and no more. Hnxley may *hope* to see *dead* protoplasm produce *living* protoplasm, dead matter produce *life.* But life out of death is a mere theory; nature's possibilities have never shown it an actuality. Facts are against it. And yet we have in our day a good deal of theorizing of this sort which does not *properly* belong to natural science. It should neither be put forth nor accepted as such.

Again, that feature of the theory called *Positivism*, and to which the tendency is now fearfully strong, is *materialism*. This would make thought matter, *feeling* matter, everything matter. And there are those scientists who do not advocate or admit atheism, who, nevertheless, *exclude* everything *above* nature. They may, like Spencer, try to prove that a first cause and the infinite cannot be known, and that, therefore, we have nothing to do with either. More, however, *disregard*, *ignore* the supernatural in man, above man. To them, the seen is everything, the unseen nothing. They regard not the intuitions of the soul and the voice of the higher reason, and have no place in this system for God and religion. And what is its *morality?* For *this* it assumes to have. Well, if freedom is given at all, it is only this,—to keep your fingers out of the fire, that they may not be burned. Or, it may be put thus: Our life is made up of three acts,—*first*, necessity; *second*, blindness; *third*, retribution. As long as the second act *remains* blindness, *so long* the play of human life is inevitable tragedy; let this be changed to knowledge, it may then become comedy. Hence, since man can bring himself, by knowledge, into harmony with Nature's laws, and so escape retribution, it is his proper work, and all he *can* do, to change the play from tragedy to comedy. Now, if capable only of *nature-life*, this would be true of us, as of the animal; but we *have* more,—a *rational* life, higher and different, in which we possess a *moral* freedom and true responsibility, which *this* theory cannot reach, and, of course, does not include. I add, the theory under consideration is the chief support of the *secularism* of the age, which appears in church and in state, in schools and in communities, and asks for present and sense gratification; while the higher interests of morality and religion here, and of immortality and a future life, are, under the all-pervading, all-benumbing influence of secularism, little, very little, regarded. I say the most plausible, *philosophic* support for all this, is the scientific theory of education in the form of *materialism*.

That, then, will not do; how of the *literary theory?* Matthew Arnold, perhaps, may be taken as type and representative of this theory. He would, if possible, restore a Grecian culture by the help of ancient and modern literature, science, and art. He would raise men, as he says, from their low conceptions of material *having* to a more noble *being*, and would stay the tide of worldliness and materialism by a wide and generous culture of the whole man. "In contrast, then, to all grosser interests that absorb us," says Principal Shairp, "he pleads for a mental and spiritual perfection which has two sides, or prominent notes,—beauty and intelligence; or, borrowing words which Swift first used, and which, since Mr. Arnold reproduced them, have become proverbial,—*sweetness and light*,—an inward and spiritual activity, having for its characters increased inward sweetness, increased light, increased life, increased sympathy."

This is the theory; what fault is to be found with it? It has a wider range than the scientific theory. Its boast is, that everything is included, and nothing excluded, which tends to develop manhood. It takes in art as well as science, history, language, and literature. It would even admit rational ideas according to its own explanation of them; the Bible, too, alongside of Plato and Shakespeare. But if none can reach the goal *except* by this long and laborious process, I fear not many will be able to reach it. A manly *character*, if not a a full *development*, must be possible by some other and shorter method. The Bible affirms this, and shows the way as open to all.

A very serious further objection is the assumption of the literary theory, that *mere culture* is enough. This never has raised,—it cannot, however complete, put above religion and morality as an *end*, raise man to the desired dignity and perfection. Religion and virtue, used as means, and not for their own sake, lose both their binding influence and their purifying effect. The ripest fruits of Grecian culture show this. But the radical defect of the literary theory is best seen in the *contrast* between *its* method and *God's* method, as the Bible presents the latter. God regards man and treats him as needing *regeneration and culture*,—the former that the latter may be sure and correct, as otherwise it cannot be; the theory assumes, throughout, that culture alone, without the new birth, will suffice.

The literary theory is more indefinite than the scientific, but both are defective, especially in regard to the *religious* need in the education of man. Let us then have a theory which is complete, and will not accept a part for the whole.

I proceed at once to a statement of this, which might not inappropriately be called the *religious theory*. That man is essentially a religious being is seen in the miserable substitute for it in those who try to reject it, or what I should call an abuse of our religious possibilities. My readers may not know that Comte, the founder of positivism, makes *Woman* his presiding genius, or goddess; and that this philosophy, falsely called positive, which denies the supernatural and smothers original instinct, must have, and is trying to construct, a so-called "religion of the future"! Comte, mainly in his proper sphere of fact and generalization, is a type and illustration of the darkening, degrading influence of a system which shuts out the light of reason, and refuses to warm and satisfy the soul by a supernatural love and reverence. Forcible illustration, also, of our Savior's words, "If the light in thee be darkness, how great is that darkness."

Now notice the utterances of two eminent students of nature, and who at the same time sought the guidance of the author of nature,—*Bacon* and *Agassiz*. In his "Student's Prayer," Bacon says: "This, also, we humbly beg, that human things may not prejudice such as are divine; neither that, from the unlocking of the gates of sense and the kindling of a greater natural light, anything of incredulity or intellectual night should arise in our minds toward the divine mysteries."

It is the poet Whittier who pictures to us Agassiz in his prayer:

"On the Isle of Penikese,
Ringed about with sapphire seas,
Fanned by breezes soft and cool,
Stood the Master with his school.

Said the Master to the youth,
'We have come in search of truth,
Trying with uncertain key
Door by door of mystery:
We are searching, through His laws,
To the garment-hem of cause.
Him the Endless, Unbegun,
The Unknowable, the One:
Light of all our light the source,
Life of life, and Force of force.
As with fingers of the blind,
We are grasping here to find
What the hieroglyphics mean
Of the unseen in the seen;
What the thought which underlies
Nature's marking and disguise;
What it is that hides beneath
Blight and bloom, and birth and death.

By past efforts unavailing,
Doubt and error, loss and feeling,
Of our weakness made aware,
On the threshold of our task
Let us light and guidance ask,
Let us pause in silent prayer.'"

The poet depicts the scene further; then alludes to the fact that though Penikese is there, of the Master it must be said:

> "On a vaster sea his sail
> Drifts beyond our beck and hail,"

And closes with the tender words:

> "Thither Love shall tearful turn,
> Friendship pause, uncovered there,
> And the wisest reverence learn
> From the Master's silent prayer."

Does the genuine consciousness of any one refuse to the religious sentiment of Bacon and Agassiz, and the devout expressions corresponding thereto, a place in the development of man? What a difference in the results from *such* teaching and such learning! We cannot have manhood, complete manhood, *without religion*. Men have developed power, both wide and enduring, in proportion as they *themselves* have been developed by truths of reason and God. If we would appreciate human life and fulfill our proper mission, our minds must be fed on something besides facts and outward seeming. We need to know history, language, philosophy; a personal God above, and moral freedom within. To develop and direct *manhood*, we need humanizing studies; things of sense are not enough; we must take first, and not second,—as of greatest, not least, consequence,—eternal realities of the unseen and spiritual world. It was the religious atmosphere in which they were reared, which gave health to the intellectual lungs of John Milton and William Shakespeare. What were "Macbeth" but for its *moral* element, or "Paradise Lost" without its religious thought? Recall an ancient writer,—poet, orator, teacher, all in one; philosopher, moralist, theologian, too, all in one: but not possessed of much of that special knowledge, thought by some essential and adequate; yes, if you can, think of *Plato*, stripped of higher morality, stripped of his rational ideas! He were, then, weaker than Samson shorn of his locks. His thinking, his teaching could not have lived into the Christian era,—not beyond his own age, any more than Shakespeare's plays without their supernatural power, could have lasted longer than the stage on which they were acted.

The *religious* element, then, must enter the education of the young. We must *have* this, and not allow it to be pushed aside; for, if there is a supernatural world, and man is related to it; if there is a personal God, and man is accountable to Him; if the Bible is true, and we have need of that Christ who is revealed in it; then, surely, any system which finds no need of God and the religion of the New Testament is erroneous, — fundamentally, radically so,— whether it is proposed for the individual or the race.

Nature has her demands,—this is granted; but if there are laws of freedom, spiritual laws,—and there are,—*these* are not to be discarded. If man has a conscience, the center of moral action, and a God above, the center of religious action, why should he not know *moral* science, and theological science, quite as much as the science of nature? I say, if there are, as we know, *moral* laws distinct from nature's, then the former *ought* to be known, *in their way*, as thoroughly as the latter, in *their way*. If a God is, *He* is to be known; and this human-descended science, practical as the life below and real as the life above, is, to say the least, as worthy of our study as any which is earth-born. The human mind should have *all* its possibilities unfolded, and be trained in a system *able to supply* its real wants. This being so, we cannot rightly put aside, in education, the *new life;* for though not derived *from* the human it is yet to be developed *in* it. Let nature's laws, indeed, be studied till they show the need, and, when studied aright, they will show the need of something higher than themselves to bring humanity to perfection. But after all, how can the inefficiency of human wisdom be known, except in the light of divine philosophy?

Let me ask again, if this superior wisdom is for *all*, designed for, adapted to all, *when* shall we *begin* to learn it? He who has made us knows our wants, and when He reveals His will is it not safe to teach it to *children?* For the same reason it must be to them more *valuable* than any other knowledge. Besides, the *discipline* needed is best secured by their being, from the first under *positive authority*, both to earthly parents and to the Heavenly Father.

Wherefore, let us demand for the young an education based on God's authority and Christ's gospel. We must reject an infidel system, and a semi-infidel no less, and adopt a *Christian* system, which may render our children more truly religious,—not tend to raise up a generation of materialists, pantheists, and infidels. To *mistake radically is to fail necessarily.* Our want of success is because of not building on the right foundation, the "chief corner-stone." The human soul is made for God and immortality; we are to treat it accordingly. The world's real progress, we know, is due to the vital power of Christianity. Those nations prosper best that are most Christian. Those parents and teachers succeed best whose efforts are regulated by Christian principles, and those schools and colleges, other things being equal, do most toward the development of a manly character which are most truly religious in their influence. Since these things are so, we ought to have confidence in the divine method and means of elevating and training men,—have our views and our methods conform to God's. When we do, our effort in education will be, I think, to give greater prominence, not to *nature's* laws, to *God's* laws.

Secularism must sooner or later confess its inadequacy. Is it not wise to avoid the results of its false lead? We need, relatively, today to emphasize, not so much *natural science* as *moral science, things made* less and their *Maker* more. The *Creator* rather than the creation, the *One First Cause as personal* rather than the many secondary causes as impersonal,—this is the great need of our time, and in education not least.

It may thus be seen in general what is needed, and an intelligent foundation is laid, for considering *how* the needed education is to be secured on the Pacific Coast. Under the term "*education,*" more is meant than secular knowledge gained, or the most ample scientific training. It is the culture of the whole man, that he may realize his utmost possibilities. Quite as little is it, what this or that religious sect may assume needful for its own advantage; rather what each and all need,—what the whole community greatly needs, and without which the highest well-being, present and future, of this great and fast-growing region cannot be secured.

We may safely start with the position that *this coast should make provision for the full education at home of her sons and daughters.* As we know the Pacific slope did not attract people, as New England, by its superior educational and religious advantages; and the gold and gain found here have not supplied them adequately. Man cannot live on gold-dust and material prosperity. California and Oregon are groaning within themselves for something better. Their unavoidable isolation would seem far less, under ample facilities for a true education, or become quite a desirable sort of isolation.

Some young men and women, awakening to a sense of their need, go East to find there what they fail to find here. But only the more wealthy can afford to do this. And surely the more promising youth, the best scholars, are not all, or many of them, able to go East. They must have their education here, or go without it, and by far the greater part will go without what they cannot secure here. The time is already come when it ceases to be a question whether or not ample provision should be made here for the full education of our youth on this coast.

Let our next inquiry be whether we can rely on State institutions to supply the demand. They may carry some branches of secular instruction to a very high degree of perfection. Suppose they do all of these. Will that suffice? Certainly not, as has already been shown. State schools, in our day, are trying the experiment of not giving religious instruction. But secular education has never yet shown itself competent to supply the wants of civil government, or of the social community, any more than of the man himself. Or rather, because such education cannot develop real manhood, it proves inadequate everywhere. The healthful influences which pervade and transform and mould the whole community, do not derive their source from secular, but from religious institutions.

Let us, then, next inquire whether the denominational schools can do for us what we need. Of these we have many up and down the coast, in California and in Oregon. Why so many? Because each sect has had here a mission, and each mission has desired a school in its own interest, and to have each school become a college, hoping, very likely, that others might not become such. But calling a school a college does not make it such. The name has not given the thing neeedd

Dr. McDonald, of San Francisco, formed a plan, and made a liberal offer, for a Christian University. In doing this he assumed, as I have done,—first, that full provision should be made on this coast for the education of the coast; and, second, that the State institutions cannot be relied upon to give a Christian education; and lays it down also as an undoubted fact, that the denominational schools have proved, and must prove, a failure in the higher departments of education. Why so? He answers, in part, for want of funds. I answer, more fully, for want of funds, for want of scholars, and for want of a constituency able to maintain a proper college. Each and severally, the denominations cannot provide the needed higher education. There must be combination. Dr. McDonald says this, but thinks it may be by sects as such. Out of deference to sectarian claims, he would even have his president elected once in three years. But every educator knows that no institution could succeed under such management. It is the weak point in the good man's scheme. The rather have the institution Christian, evangelical, but not sectarian, raised above that,—independent of it; let it be in the hands of Christian scholars, and under a board of men fairly representing its patrons; then all the best Christian people, as such, not as sects, will come to sustain it.

Let me illustrate. In 1872, while in Constantinople, I preached in Robert College to some two hundred boys of sixteen different dialects. Wondering at the earnest attention of these youth, I asked

President Washburn, "Do you regard any of them as Christians?" He replied, "Yes," referring particularly to one of the best scholars, a Bulgarian. "Has he declared himself such?" I said. "No," he answered, "nor do we ask it; in due time we presume he will do so; if missionaries we might press it now, but as educators we cannot. It would drive from us those whom we would benefit, and whom we hope to see become Christians. You may be surprised, if I tell you, that this is not a Protestant college; it is Christian, not Protestant. We can, and do, give in it daily religious instruction, with unrestricted Sabbath services, as you have seen." At the start the missionaries, as I learned, feared this college might not be a positive help to them in their efforts; but the results showed their fears groundless, as they themselves said to me when there. Now, put sectarian in the place of Protestant, and this illustration serves my purpose well. So do we need, so we must have, or fail of securing the genuine college which can educate our youth,—must have an institution Christian, but not sectarian. Our ism is not to stand in the way of a higher interest. Education proper need have nothing to do with denominational lines. These only hinder when the attempt is made to place them around it. The rather let us have grounded in Christian confidence, and devoid of jealousy, a generous co-öperation; then will the sects themselves, each and severally, be strengthened, and together exert a much greater and more healthful influence for Christ and his cause. How much better this than for each one to say, I am of Paul, and I of Apollos, and I of Cephas, and I of Christ, —as if the Christian cause itself could be divided, or as if a really Christian culture were not the same denomination, or no denomination! how much better than the sectarian effort, which cannot succeed, and which is only another illustration of losing life by seeking, in our way, to save it!

Even suppose a theological department needed, it is not now, but will be, much sooner by unison; then more than for the sake of economy,—which is much,—there should be coöperation. Why not? Do Congregationalists need a different exegesis and interpretation of Scripture from Presbyterians, for example? Is not church history the same for both? Is not a systematic course? Is not sermonizing and pastoral theology? And how few lectures could be required to give the specific difference in church polity; *i. e.*, in the organization and discipline of the different sects? Can any good or Christian reason be given for the two weak theological seminaries in California? I trust the false lead may not be followed in Oregon. Christian givers in the East desire union and success, not division and defeat. And if in theology, much more in other departments, in all preparatory and college studies, there should be unison, to accomplish thereby what no one denomination can do alone. Religion and Christianity should be in schools; sects and denominations, not. So I believe and hold.

A further explanation is here necessary. A school is, in name, sectarian, when directly under control of some given denomination; in name, undenominational, when not under such control. But do not mistake,—a so-called undenominational school may be made, in fact, denominational. Let its trustees be chosen simply because of their church connection, while representative men are not invited into its board, because, and simply because, they are of a different persuasion; in short, let the denominational interest determine where the educational one should do so, and what is the legitimate inference? Surely something more than the name is essential, that all denominations may feel welcome to a Christian but not sectarian school.

Olivet College is an illustration in fact of what I would say, and of what I would have more than theory in this scattered population of few churches and few members, and where unity of action is far more essential to success than in Michigan. I give the testimony of President Butterfield in his own words: "Olivet College was founded in 1844, by a colony from Oberlin. No conference or presbytery stood sponsor for it. Its first friends were mainly Congregationalists; but, as the years rolled by, Presbyterians,as individuals, became interested in it, and consented to serve on its board of trust. Two-thirds of the money has come from Congregationalists, and two-thirds of the trustees belong to that body, but neither Presbyterians nor Congregationalists are formally and officially recognized. Congregational and Presbyterian bodies commend us, but it is simply an expression of their good-will. They send visitors, but they exercise no authority over us. You will observe that the union of the two elements is natural and voluntary, not formal and ecclesiastical. It works well. Not an ecclesiastical ripple has appeared. It promises to work well." He adds, "I hope that Pacific University is to be a success." That it may be, shall we not have unity and coöperation here, such as is so happily exemplified in Olivet College?

Can we not say with a Bible translator and theological teacher in the Orient,—"It is the right thing for the Christian people of Oregon to give largely for the institution;" and as to these two bodies, "not only is there no reason why they should not unite, but there is the strongest, indeed every reason why they should." In very many places they ought to be united ecclesiastically; and certainly in educational work there is no excuse even for their working separately.

You must see, from what has been said, that I emphasize the importance in this region of one institution so endowed and supplied that it can show by giving it, what a truly higher and Christian education is. It need not seem strange that the supply must awaken the demand. This is so elsewhere. Raise the best wheat, if you would command the market; show your superior horses, cows, and sheep, if you would have the farmers buy them; make the best paper in the State, then the people will have it. In education the same is true, and more also. Harvard College graduated its first class in 1642: "For Christ and the Church" its motto, a Christian institution of high order, and fostered by the State, and to do a work not appreciated by the many, and for which at the time they seemed quite unprepared. It was sixty years before the next college, Yale, was founded. This, like Harvard before it, was a Christian institution of high order. Another fifty years passed, then the college of New Jersey, "Princeton," came into existence. And what a vast, untold influence these three colleges have exerted. The total effect of a Christian college, if both a college and Christian, is vast indeed, though greatly underrated.

Two years ago, in a paper read by the librarian of Yale College before the Massachusetts Historical Society, this position was taken, which places in a forcible light the importance to a forming community of a college which is such indeed: "It is hazardous to transpose history, but I do not think it rash to say that a failure to plant and endow Harvard College for five-and-twenty years; that is, until the most of the generation of educated men who came over had passed away, would have so stunted and paralyzed the social progress of Massachusetts as to have essentially altered the whole course of events bearing on national history in which Massachusetts has had a part." In such a college the best minds are educated, and thus it prepares the leaders. It helps to awaken and direct the right sentiment in regard to education, as also a desire to secure the full benefits of the best course of study. This age, and every age,—this nation, and every nation,—this part of our land, as well as New England and other parts,—needs, and ever will need, the education which only a first-class Christian college can give.

I speak of *one genuine college* for this region, not many; for many there cannot be for a long time to come. Various academies, fitting-schools, feeders, may help on the needed work; but all trying to be colleges, they hinder, greatly hinder it. They thus fail of the proper dignity and efficiency,—are weak, secure small patronage, want the enthusiasm of numbers, exert very small influence, and thus open the door to bad influences in the community which a wise coöperation might keep out.

Moreover, the one institution should be for *both sexes*. The first colleges in our land were for men only. Now, provision must be made for the other sex,—this either by separate or by coëducation. The sentiment in the older States has favored the former method; the newer, the latter. Still, coëducation is gaining favor in most places. Surely here it would not be necessary to argue the point that provision should be, and can best be made, for both sexes in the same institution. But I must ask your patience to some words on the higher education of women on this coast.

It is only about forty-five years since Mary Lyon,—under the strong conviction that young women ought to have, at moderate expense, the possibility of a full education,—founded Mt. Holyoke Seminary. Such institutions could not be called colleges then. It was even thought by some in New England, fifty years ago, that females did not require further opportunities. But, from the first, this seminary was overcrowded. Since then many similar institutions have been established in the States, in many missionary fields, and recently, and with astonishing success, in South Africa. Schools for this sex now venture to take the dignified name of college,—as Vassar, Wellesley, and Smith; this last claiming to be on a par with Amherst. The University of Vermont, that of Michigan, and some other colleges, as well as Oberlin, open their doors equally to females and males. Harvard in this country, and Old Cambridge in England, are making provision for women, as well as the University of London, and recently both are conferring equal degrees to both sexes. Besides the superior private instruction with which women of the higher classes have been favored in England, the institutions in that country for the higher education of women are over fifty. "In Germany, and several other European countries, the State Governments, as well as the municipal authorities, have in the nineteenth century begun to establish female schools of a higher grade."

The progress in the higher education of women in the United States is indicated in these statistics: In 1870, 33 reported to the Bureau of Education. These had 378 instructors and 5,387 students. In 1874, 209 reported, having 2,285 teachers and 23,445 scholars.

Surely, not to make ample provision for the education of women is to be behind the spirit of the age in which we live. This elevation of woman by education,—due more to her than to man,—is likely to have very much to do with the spirit of the ages to come, and with human progress. Whether we are behind in this matter, judge ye. It is a question of vital importance,—that of the higher education of women. They need the better Christian education for teachers; for, when educated, they are in many respects better teachers than men. At any rate, as has been well said, "It is best that the minds of youth should come systematically in contact with teachers of both sexes, to such an extent that the teaching, character, and influences of one sex shall fairly supplement and qualify those of the other."

You may say, "Women are destined to be wives and mothers." Very well; let it be so. Then, I ask, can any one measure the influence, in her own family, of the true and well-educated woman? Or the difference whether she is educated or not?

Which sex, when all is told, has really most to do in forming society? Recently I have fallen on these two suggestive passages; the one, "The proper education of women has been recognized as an important, perhaps the chief, factor of social progress." The other, this: "What is pure and modest and feminine in woman lies at the basis of our social purity and welfare." Has the Pacific Coast the means of giving that intellectual and Christian culture which woman should have? I think not; and yet, rightly considered, the Pacific Slope cannot present to-day a more imperative demand than this. Let adequate provision be promptly made, and I believe one generation would give back a hundred-fold reward. The difference for the future between having, or not having, what is needed for this object is beyond the possibility of any one to declare.

Let us have, then, one well-endowed institution, able to give to both sexes a really higher and Christian education. Another has said, "Pacific University must be the Amherst of the Northwest Pacific. Yes; the Amherst and the Williams, too." Why not add, "And the Mt. Holyoke, also"? for both sexes are to be cared for in it. And why not *this* institution be the one? Is it not established, and has it not secured a reputation for thoroughness second to none? With what it now has, cannot Pacific University more easily be made what is needed than any other school? Is it not so located that it might easily supply all this Northwest Coast with the higher education required? Can it not be unsectarian in fact as well as in name? And why should it not be thoroughly Christian?

The question now pressing on the trustees and friends of this institution, I take it, is this: "Shall Pacific University be made what it may and should become?" It has done, in the past, a good work,—all thanks to those who, in trial and self-denial, have labored in its behalf! But of late, for various reasons doubtless, it has been holding on rather than going forward. And yet, to keep step with the rapid growth of the country, and to provide for it, meantime, Pacific University must take a new departure, and this it should do at once, not thinking to provide for what is to be on the scale of what has been. To do this, of course, funds are necessary; a liberal addition to endowments for salaries, funds for libraries and apparatus, and a scholarship fund to aid needy and deserving students. Besides these demands, three buildings are needed; or, if we do not name a president's house, provided and owned in many places by the institution, two; the one, a central main building which has always been to be, but is not yet, but which should contain a commodious and tasteful chapel, library, cabinet, and recitation-rooms; the second, a ladies' hall which, under a matron, can allow the pupils to economize by doing their own work, and, under Christian teachers also living in it, be a home for the young ladies; their manners, morals, and Christian character being cared for as directly as at Mt. Holyoke or Wellesley; and where also, under proper supervision, both sexes may take their meals together.

If, now, having studied the Pacific Coast from an educational point of view, I should make confession of my faith in this regard, it would be something like the following: I believe in scientific study, but not as embracing all which man needs, while I utter my protest against that materialism into which some would plunge us. I believe in culture, too, but not as being sufficient. As I believe in God, so also in a truly religious education; and as I believe in the Bible and the Lord Jesus, so I believe in a thoroughly Christian culture. Such an education is what this Northwest Coast needs in the form of higher education for both sexes. But while it cannot be secured by merely secular schools on the one hand, so on the other I see little hope of securing what is, in reality, needed by separate ecclesiastical schools. In this scattered population, not well appreciating the college, what it should be and what it should do, there must be concentration, union, coöperation of the forces and resources, if we would obtain, supply, and make effective, one such Christian institution of high order, that can be a power as a controlling influence for good, increasing more and more through the successive generations.

I look to the development of the whole man as alone worthy to be called education. I regard adequate provision for the higher education of young women as very important, and I believe a ready and ample supply of the wants of Pacific University as having a vital relation to the best good of the North Pacific, both present and prospective. I look upon this as of more importance than railways and every kind of material wealth. I also regard it feasible, with proper union and liberality of effort *now*, to secure what delay will render less certain and of inferior value. Oregon and Washington have needs many, no doubt, but the greatest of all is that of manhood and womanhood. If true prosperity can come without these, it must be against the testimony of history everywhere and always.

THE PLACE OF THE LECTURE.

BY ISAAC SHARPLESS.

The formal lecture, as a means of instruction in schools and colleges in this country, has fallen into disuse bs the most successful educators. In its modified form, as a Socratic dialogue between teacher and pupil, it yields abundant good results. The American college student is, in general, too immature to make such copious and judicious notes of an hour's uninterrupted lecture as to develop the subject in his own mind afterward. He needs the system and the fundamental facts of a text-book of reference, on which, as a skeleton, he may place the warm and living tissue of the teacher's explanation and illustration. The pure lecture is to most classes uninteresting and does not invite investigation. The lecture, to a class of students who have already worked up the subject, interspersed by pertinent questions from them, illustrated when feasible by blackboard or chart, is a most pleasant and stimulating exercise.

With a full knowledge of the book which the class has studied, abundantly supplied with collateral information and illustrative facts, the teacher meets his students. A few questions put to one of them soon show how faithfully he has done his work, what difficulties he has found, and afford a good basis for a long and informal talk, in which the statements of the book can be explained, modified, and criticized, and the opinions of other authors presented. The accumulated knowledge of other students will soon be drawn into the common fund by judicious suggestions, and their various crudities and inaccuracies exposed and corrected. The text-book will be truly a book of texts, on which the teacher hangs his sermons. The class learns to criticize, to weigh evidence, to come to conclusions. It is stimulated to search in cognate fields, and feels something of the glow of original investigation.

"The recitation, considered as an opportunity of examining a student, to see whether he has learned the lesson of the day, and to give him a mark of merit or demerit, has well nigh disappeared from the University. It has become for the teacher an opportunity to give conversational instruction by asking questions, addressed either to an individual or the class, with a view to correct misapprehensions, and to bring out the main points of the subject clear of the details, by explaining the author in hand, or contravening, illustrating, or reinforcing his statements. For the student it has become an opportunity to ask questions ; to receive either in a critical or docile spirit the explanations or opinions of the instructor; to review the lesson or re-examine the subject of the day, and to test, occasionally, his own power of translating or stating a proposition, a case, an argument, or a demonstration; of narrating a series of events, or of describing a plant, an animal, a disease, a building, a person, or an institution. For teacher and student alike, the recitation gives opportunity for personal acquaintance and a somewhat intimate intercourse. In many recitations, so-called, the teacher does the greater part of the work." [1]

Any one wno has tried the experiment of examining a class on the matter of a lecture delivered the day before, on which there was no examination expected, knows how little even the best prepared student can tell of it. The writer has repeatedly attempted to draw from intelligent young men the main points of lectures,—points which had been emphasized and illustrated with great care.—and his repeated failures have convinced him that such lectures, *as means of instruction*, are so much energy wasted. The audience may be interested, excited, or pleased ; but it is not, except in a few cases, where the recipient has given special study to the subject, instructed. A young man cannot be educated by lectures alone, no matter how excellent they may be. Much careful preparation and mental exertion, much money invested in costly scientific implements, fail fo their intended object, because they are presented to students in the shape of elaborate formal lectures, for knowledge of which the student is held to no accountability. The facts going into his brain through no mental exertion of his own, find no permanent lodgment there.

We would not intimate that such lectures are useless. While largely so for the purpose of instruction giving, they subserve another purpose of exciting interest in the subject, and making it popular. If skillfully written and delivered, they will set some of the hearers to work in the field, and stimulate reading, study, or observation. While not doing this so successfully or so systematically as the Harvard "recitation," they need not be accounted as absolute failures. While not lodging facts permanently in students' minds, they give a general impression that there is something worthy or grand, or interesting in the subject treated of; something which has induced a person toward whom considerable respect is felt, to spend time and effort in presenting it, and consequently which is worth time and effort to procure; which promises more as the result of more exertion, and toward which a certain propulsion is felt. The student's mind is put in a favorable condition for the reception of knowledge and for healthy growth, and if then taken in hand by a skillful instructor, can readily be induced to utilize the interest begotten by the lecture.

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[1] From Report of President Eliot of Harvard, for 1879–1880.

No lecture should be given in a school without being followed by a requisition, on the part of all students capable of it, to write a synopsis of it. It should be followed by an elaboration of its contents at a time which will allow of asking and answering questions, and a definite course of study should be marked out for any one desiring to continue the subject. These three things are necessary to prevent the time and money put into lectures from being thrown away.

Some of the same remarks apply to public lectures. Attendance being voluntary, and obtained at some cost, only those who are interested usually are found there. Hence, more attention is paid to the lecturer's remarks, and more instruction is gained from them. But in this case, too, the stimulation of interest in the subject is the principal advantage. The lectures of Prof. O. M. Mitchell on Astronomy, a few years ago, aroused a wonderful enthusiasm for its study. Themselves not remarkable as statements of facts, they conveyed the idea that something extremely fascinating was to be found in the subject from which the facts were drawn. In general, a "run" on the books of a public library follows a successful course of lectures.

It is, therefore, much to be regretted that the prevailing "fashion" in public entertainments is not in the direction of substantial lectures. A person is more apt to get what he pays for in a humorous than in an instructive lecture. He is amused in one case, while he is not usually instructed in the other. And this fact, and the general tendency to ups and downs in any institution, may explain the present lethargy of the lecture bureau of ten years ago.

But the public suffer by the change. The comicalities of Burdette and Nasby please for a moment, but result in no lasting good. It is the illustrations of Gough's lectures,—illustrations which apply equally well to all the subjects on which he speaks, rather than the principles involved,—which people hear and heed. The stimulus to investigation is withdrawn. A state of mental passivity and immediate forgetfulness is now all that is required of the lecture-goer.

The character of lectures is an index of the intellectual standing of a community. Any one will go to hear a discourse on a subject in which he has an interest, so that the relation exists in both directions. Mental sluggishness causes a dearth of good lectures, and the lack of lectures perpetuates the mental sluggishness. Were there no antidotes, the matter would go on from bad to worse. But so numerous are the educating agencies in public society,—the newspapers, the great illustrated monthlies, the societies for home study, and other institutions which reach the more intellectual classes,—that it cannot be fairly stated that the decay of the lecture system is in exact proportion to the decay of mental life.

In an eastern city of fifty thousand inhabitants, known to the author, there has not been a real lecture for several years. In our large centres of population the popular courses are now composed principally of humorous and musical entertainments. Such speakers as E. A. Freeman, who can give facts well worthy to interest cultivated people, have spoken in them to empty benches. It is so everywhere, more or less. The lecture bureaus have no call for lecturers. Cheap musical talent is more in demand than fine oratorical powers, or the results of ingenious research. It is a subject worthy of investigation, whether this does or does not reveal a change for the worse in the mental habits of cultivated people; whether or not money-getting and money-spending are exhausting more and more the energies of the people, so that they have no zest for culture of the mind.

The great preventive of these evil tendencies lies in the right education of the youth, in the strict *régime* of college life, which begets some mental training and certain right mental habits; in the spread of college ideas which subordinate the sensual to the intellectual, giving the young man nobler ambitions than to excel in wealth or to keep an expensive establishment; which holds before him the exceeding dignity of knowledge and the power of a trained mind.

While the trashy weeklies of the day furnish the food of many families of repute, destroying all good impulses and warping the motives of growing boys and girls, not much can be expected in the way of appetite for, or power of digesting, wholesome literature or lectures. But when this can be made to give place to the Greek and Geometry of College; when real work is done with a definite end in view, then the index points in the direction of hearty encouragement of solid intellectual agencies.

THE POLYTECHNIC SCHOOL:

ITS GENERAL COMPOSITION AND ITS GRAPHICAL WORK.

BY S. EDWARD WARREN, C.E.

We will begin this article with a series of pertinent facts, and more or less clearly obvious general principles, briefly stated, and will then follow on to some applications.

1. In choosing the designation "Polytechnic School" for our title, we mean the same kind of institution which, in the present conspicuous lack of uniformity in the matter, is also called "Scientific School," or Technical or Technological School or Institute: all having practically the same meaning; viz., schools for teaching the applications of the principles of mathematical, physical, and natural science to the useful arts.

2. There are and long have been two ways of gaining an education of any kind or degree, as regards the agencies employed for the purpose. These ways are that of private or individual instruction, and that of school or class instruction.

3. There is a remarkable difference among the various grades and kinds of education as to the proportion of pupils found engaged in study in each of the two ways just pointed out.

The common school and the college were planted early, or at the outset of the career of the American people, and nearly or quite together. But preparation for college was often gained by private study with the minister, or other scholarly man. Now, however, elementary, preparatory, and collegiate study is almost wholly conducted in institutions, public or private.

4. Leaving general for professional education, many living persons can remember to what a large extent preparation for the gospel ministry was made in the study of some noted pastor, of sound learning and strength of character, as compared with the number who were prepared in theological seminaries. The like is true to a greater or less extent of the study of law or medicine.

So also, in a very marked degree, has it been with the professions of architecture and engineering in their various subdivisions. England, from the days of Smeaton (1724–1792), Tredgold (1788–1829), and Watt (1736–1819), not to mention the pioneer Yarranton (born 1616), and the Welshman, William Edwards (1719–1789), has had her eminent engineers, largely self-made, though aided by books or schools, or older professional guides, under whom to serve a virtual apprenticeship.

In our own early history, the names of Ellicott; Geddes, the surveyor for the then proposed Erie Canal, in 1808; Gridley Bryant; B. H. Latrobe,[1] and others, will occur as examples of eminent engineers, who, by diligence and force of character, have risen from the ranks, not without the aid of books, but without the aid of special schools of engineering.

5. Of all grades and kinds of education, professional education in architecture and engineering, especially in the former, is that for which theprovision of appropriate professional schools is the most recent. The experiment now going on in them is to determine whether, on the whole, better engineers, etc., are made by the old, or virtual apprenticeship system, as it may be called, or by the engineering-school system. It will also demonstrate the truth or error of the proposition implied in the argument that, if the men above-named and others like them, accomplished what they did with the scanty aids which they had, what might they not have done if they could have availed themselves of the services of a well-manned and equipped engineering school.

6. The distinctive character of the two methods here indicated may be roughly stated as follows: The empirical, experimental, or apprenticeship method gives familiarity with details of practice, with actual instead of supposed cases, and with expedients. Except as a good knowledge of mathematics and mechanics has somehow been gained, it also leads to a dependence on precedent or on "happy guessing," rather than on an intelligent application of mechanical principles to the designing of structures.

The school method tends to make theory more or less highly prominent, though by no means exclusive. Perhaps we should say principles instead of theory, as this much-abused word is too much understood in this and similar connections to mean mere visionary speculation. By theory we here mean, not a body of supposed scientific truths which possibly may account for natural facts and so guide practice, but a body of real and demonstrated truth which does account for phenomena and correctly guides practice.

7. Each of these methods has superiority in its own field. The Hoosac Tunnel and the St. Louis Bridge, not to mention other equally great works, are, in their own way, such a school to the young

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[1] Stuart's *Civil and Military Engineers of America.* Van Nostrand, 1871.

engineer who studiously follows their construction from beginning to end, as no institution can be.

On the other hand, it has been said that some who may be strong in the artistic, or executive elements of their total qualification, but weaker in the mathematical ones, are compelled to call in the aid of experts in mathematics and mechanics,—graduates of technical schools of a high order,—to make the computations and intricate drawings which are necessary when large, difficult, and comparatively unprecedented work is to be done.

8. It is, accordingly, an open question, whether polytechnic schools should lay out their time and strength mainly in securing fullness and thoroughness on the several bodies of scientific theory,—mathematical, mechanical, etc., on which the various engineering specialties depend,—or whether, by means of many and well-used laboratories, and lectures on real practice by professional experts, such schools should make school training as nearly like actual professional life as possible.

9. It may, perhaps, indicate a correct answer to this question to simply remark that the theory, as explained above, is of undoubted importance, and can probably be gained in the school more conveniently than anywhere else; and that the best practice is to be had in real life, however successfully and advantageously the school may initiate the student in it.

To discuss this question further here would, however, lead us too far away from our immediate purpose; and we, therefore, proceed to say that one must have some clear general ideas as to what a well-developed Polytechnic school as a whole is, or should be, before the proper scope and extent of any one of its departmeuts can be under stood. Hence the two-fold sub-title of this article.

10. A certain difficulty arises at this point, however, which it may seem ungracious to mention, in view of the rapidity with which technical schools have sprung up in this country; the zeal and enthusiasm with which they have been organized, managed, and attended; and the generosity with which some of them have been endowed. This difficulty consists in a more or less general lack of adequate apprehension of the character, scope, and bearing of some, at least, of the fundamental studies pursued in this class of schools. In a word, American polytechnic schools are so recent that it is quite essential, to the best results, in the absence of a large scientific public, that graduates, and other accomplished practical scientists, as well as gentlemen of literary culture and business talents and experience, should be influentially represented on their managing boards.

11. But passing by the difficulty just noted with only a brief mention, as one which would seem likely to correct itself before long, we will next attempt to distinguish clearly between a trade and a profession, and thence between a trade or industrial school and a polytechnic school.

A trade, that of a carpenter, or harness-maker, or any other, may be said to consist of a series of operations, the order and manner of which have to be learned by practice, which, of itself, gives the operator an increasing facility in the performance of those operations, and practical acquaintance with the nature of the materials on which he works.

A profession involves, in addition to this, a knowledge of the natural principles,—mechanical, physical, chemical, or other,—on which actual or possible processes depend, and hence involves, with this knowledge, power to certainly apply such principles to new cases, which present new requirements.

Or, even if we take a lower view, and say that a trade and a profession differ more in the degree than the kind of knowledge requisite, still the difference is great. For a shoe may be as handsomely fitted to a wooden foot as to a living one; while, to amputate the latter requires such a knowledge of its internal structure as will govern the necessary operations: and the still higher achievement of saving the foot requires a further knowledge of the action of its parts under various conditions.

But accepting the former distinction, as one of processes or of principles, as essentially correct, a trade-school would chiefly train the hand in the performance of operations, while a professional school would also afford thorough training of the mind in the body of principles on which the processes depend.

12. From this broad idea of what a polytechnic school is, we pass on to add, that any such school may propose but one course of study leading to a degree, or it may propose several. The former is mono-professional, fitting for one profession; the other is poly-professional, fitting each of its pupils for some one of several professions. Both are polytechnic, in that they afford instruction in the practical applications of many distinct sciences.

When we say several professions, it must be understood that, to a large extent, varieties or specialties of one comprehensive profession are meant. For, as oculists, aurists, dentists, and others, are specialists in medicine and surgery, so road, bridge, hydraulic, mechanical, mining, sanitary, electric, and other engineers, are specialists in the comprehensive profession of civil engineering. Besides engineering in this broad sense, are architecture, with various specialties, church, domestic, etc.; and the technical applications of physics, chemistry, geology, and natural history, to heating, lighting, etc.; to the manufacture of chemicals, as sulphuric acid, or to the industrial uses of chemicals, as in dyeing, soap-making, etc.; to mining; and to forestry and agriculture.

13. The Great Eastern is a fleet in one vessel, and is not a success, physically or financially. Physically, it can be in but one place at a time, while the equivalent fleet might be in five, giving a larger aggregate accessibility and accommodation. Few places can accommodate it, or find a cargo for it, and while it is loading the fleet might be sailing.

The parallel may not hold in all respects, but we confess to a preference to that application of the principle of division of labor, which assigns one work to one school,—at least, to the extent of limiting the work to the specialties of one comprehensive profession.

We thereby retain, if we wish it, whatever of richness lies in the idea of a compound unity, whether in the separate specialties in the final year of training for the one profession provided for, or in the several chairs of instruction, each complete in itself, as to its specific work. But we do not introduce the complexity which may be called decompound.

The dilemma is this: If an institution which undertakes to teach all the specialties of all the professions is organized as a unit, in having one undivided faculty, inextricable confusion and conflict inevitably arise. Subjects common to various courses bear differently on each, and hence should be given differently to each; and the young student is bewildered by the multiplicity of choices placed immediately before him. But if each professional course is housed in a separate building, and with a separate faculty, to the full extent which is desirable, thus forming really a separate school, these schools would better accommodate the nation at large and the particular industries affected by them, if they were scattered, so that each should be in a centre of the industry served by it, if that industry were a local one.

But we pass on to another point:

14. The present educational position of American polytechnic schools, however designated, is mixed, decidedly mixed. This is true, both of their work and their affiliations.

As to their work, they are all, in part, doing the higher preparatory work of high schools and academies, in teaching some of the subjects which ought to be required for admission, for the reason that they are as elementary as are many of the subjects which are required for admission. This is notably true of elementary mathematical or mechanical drawing,—a study which, moreover, would be practically useful to thousands who can get it nowhere and never, if not in preparatory schools; and would contribute largely to make such schools preparatory to intelligent, and honored, and satisfied industrial life, as well as to college or mercantile life.

Polytechnic schools are also doing, in part, the work of colleges, in so far as they teach history, literature, philosophy, and other subjects of a general liberal education. Indeed, the same is true, only in a less degree, so far as they teach the general principles, as well as the professional applications of the requisite sciences, mathematics, mechanics, chemistry, etc.

Every advance,—such as we are happy to note in some of our most thriving schools,—in the number or the elevation of the requirements for admission, is a step toward the complete remedy for both of the incongruities just described. Especially every collegian, well and profitably admitted to the third year of a polytechnic school, counts one toward making that school really and only a professional one, as it should be.

15. As to affiliation, a few of our polytechnic schools, as at Troy, Boston, Hoboken, or elsewhere, are independent; which seems to be the best way, if only for the very simple reason that the education which they give is a new beginning less than a century old, adapted to the new wants of the age, and therefore best not made a new patch on an old garment. Others are attached to institutions of the elder type, descendants of the early universities of Italy and Paris, and sometimes with the evident result that the new agreeth not with the old.

Such attached schools or departments would naturally be classed by practical managers, as to the rank and regulations of their members, with the college undergraduates of like age and maturity. But if their professional work is well developed, and vigorously conducted by teachers and students alike, working together with manly enthusiasm, these schools or departments should by all means be placed in all respects on the same footing as the other and older professional schools which cluster around the college as a nucleus. Thus we should have a healthy and natural manifestation of the old adapting itself to the requirements of the new.

16. Taking only a school of engineering for an example, in coming now more immediately to the composition of the course of study, we begin with two general remarks:

First, Some of the subjects of study are fundamental in such a course, and others are secondary, though they would be primary in some other kind of technical school.

Second, In each department or chair of instruction, some of the subjects are general or theoretical, embracing the general principles of the science, constituting the departments ; and others are applied, practical, or professional.

In an ideal polytechnic institution, instruction in all the general subjects of all the departments might be given in a central college of general science, along with the requisite literary culture ; while the several leading specialties of the profession contemplated by the institution would cluster around this nucleus.

In such an institution as a whole, to which a few of our highest scientific institutions substantially tend to conform, and speaking as proposed only of engineering, the following departments are primary, or fundamental :

Mathematics ; algebra, trigonometry, analytical geometry, and the calculus.

Mechanics ; of solids and fluids ; rational ; physical, taking account in a general way of the properties of matter ; and technical, as applied to structures, to fulfill prescribed conditions.

Physics ; pneumatics, heat, light, etc.

Geodesy ; topography and construction, or the measurement and representation of ground, with lectures on the *actual building* of works, designed in accordance with the principles of mechanics, for the measured and prepared ground.

Graphics, theoretical and practical, otherwise called descriptive geometry, stereotomy, and mechanical drawing.

Chemistry, geology, and natural history, however primary elsewhere, and intrinsically interesting and important, must of necessity be secondary in an engineering school, while language and literature should be quite superficial and supplementary ; not because an engineer has no need of them, but because they should have been previously studied.

17. Mathematical graphics, its theoretical foundation being a comparatively new science, little attended to outside of polytechnic schools, seems to call for more detailed explanation.

There were scattered here and there, in the busy and fertile brains and stone sheds of the bold and skilled mediæval cathedral-builders, various ingenious conceptions and representations of complicated combinations of surfaces. Feeling their way along from generation to generation, quite a body of constructive solid geometry of form and position was accumulated, but without scientific shape by means of an orderly development from first principles.

But Monge, the founder, in 1794,—and afterwards, by Bonaparte's appointment, the head of the celebrated polytechnic school of Paris, —originated, while at the engineering school of Mézières, in 1766 and onward, a new department of geometry, to which he gave the name of descriptive geometry. His power and capacity as a scientist are further indicated by his notable contribution to the advancement of the calculus,[1] his membership in the Academy of Sciences, his appointment to the Ministry of the Marine under Napoleon, etc. His testimony is, therefore, entitled to great weight, and is as follows, freely and briefly translated:

"If I were to rewrite my work on analysis (including the calculus) applied to geometry (a work in which the infinitesimal calculus has enabled me to discover and demonstrate many before unknown properties of curves and surfaces), I should write it in two columns. In the first I should give the demonstration by *analysis;* and in the second, I should give them by *descriptive geometry*,—in other words, by the method of projections; and, when finished, one would be surprised, in reading the work, to see that the advantage would nearly always be on the side of the second column, in clearness, simplicity, and in facility of application of the theorems to the various works of engineers."

Olivier, the founder of the Central School of Arts and Manufactures, Paris, and the most voluminous and indefatigable author on the subject, in four stout quartos has devoted himself, in his ingenious works, to illustrating the truth of the views of Monge. Leroy, and Gournerie, successive professors of descriptive geometry and its applications in the Paris Polytechnic School, and Martelet, professor of the same in the Central School just mentioned, have followed in the same line with ample quartos; but giving more attention to the science as a means of representing every conceivable form, and exhibiting its properties than to using the method of projections as a means of demonstrating properties otherwise discovered,

Many other works, French, English, and American, are elementary text-books, and mostly limited to the treatment of the science as a means of representations on planes of forms in space,—the attention paid to the subject in England and America not being such as to warrant the publication of larger works. I trust to be pardoned, however, for mentioning that, in my descriptive geometry of 1874, I attempted the experiment of giving a few examples in one single subject out of many (conic sections) of demonstrations of properties by the method of Olivier.

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[1] Olivier. *Des Geom.* Part I. Preface.

18. But it seems more independent to argue this question on its merits than by reference to authority and precedent. Let it be understood, then, that *form* and *number*, oherwise called *position* and *measure*, are the two main divisions of the entire field of geometry. The proposition that if the opposite sides of any hexagon inscribed in a circle, or any other conic section, be produced, they will meet in a straight line, belongs to the former division. The proposition that the area of the surface of a sphere is equal to the product of its diameter by the circumference of a great circle, belongs to the latter division.

Now, descriptive geometry deals immediately with relations of form and position; and whether it demonstrates such relations, or metrical ones, it does so by considering those of form and position, as shown in geometrically (not merely mechanically) exact representations on planes, which are therefore equivalent to the forms in space. And as Monge and Olivier both say (the latter in his *New Demonstration of the Principal Properties of the Conic Section*), and both wonderfully illustrating their opinions by their works, descriptive geometry, or the science of projections, furnishes a language of lines, in which geometrical truth may be written, as the language of analysis writes them in symbols.

It is, therefore, evident enough that a well-rounded training in geometry, whether in a course of liberal or professional education, should include descriptive geometry. Indeed, we may say that if analytical and descriptive geometry cannot both be taken, it might well be optional which should be chosen, in order that, at least among mathematical students in the aggregate, a knowledge of both might be represented.

19. When we turn from general mathematical students to those of engineering and architecture, the considerations are even more decisive. These persons can never be too familiar with geometrical forms and their exact representation on paper, in all modifications, positions, and combinations. This is what their profession constantly requires of them. It is also just what descriptive geometry directly aids them to become. Descriptive geometry, with its applications, is thus demonstrated to be fundamentally necessary to these professions.

In itself, it embraces planes in space; the many surfaces of which common cylinders and cones are a familiar example, and which can be cut and unfolded on a plane; the many interesting or useful warped surfaces, as a screw-surface, which cannot be so unfolded; and the various surfaces of which the sphere is the simplest example, and which is curved in every direction. Numerous operations have to be performed with or upon all these, which, with the reasons and meaning of them, must all be well understood.

In its general and technical applications, it embraces shadow and perspective construction; the drawing of engineering works and machines, carpentry and stone-cutting, as far as to provide the guiding drawings and patterns for properly shaping the pieces of stairs, framings, arches, etc.; all the graphical part of practical Cinematics, or the shaping of gearing of every kind, so that it shall produce the intended motions,—and finally, dialling, and spherical projections, or the geometrical part of the quite extended subject of scientific geographical map drawing; besides the elegant and useful *specialties* of isometrical and axonometric projections, and the "one plane descriptive" which is principally applied in the drawing of fortifications and military maps.

Any new design, as the "Monitor" and its machinery, the East River Bridge, a public building, or a mountain locomotive, and a thousand lesser things, exists at first only in the mind of the designer, as truly as *Ivanhoe* first existed only in the mind of Scott, or the *Rise of the Dutch Republic* in the brain of Motley. In both cases alike, the original conception can be made intelligible to others only through some kind of language. Now, mathematical drawing is the language of design. The system of projections is its alphabet, and descriptive geometry is its grammar and reader.

Written in the language of projections, the thought of the designer or inventor can be read by the builder or workman, and by them translated into wood, stone, and iron, for the eyes and use of the world. Enough. We all see it. Then we will pass to the next point.

20. This simple exhibition of the scope of descriptive geometry and its applications, which might be indefinitely expanded by going more and more into particulars, is of itself enough to show, not only, as before urged, that this department is properly one of the fundamental ones in an engineering school; but that it is abundant, in the case of any well-developed and well-proportioned engineering course, to occupy the entire time of one professor, with assistants proportioned to the number of students.

Just here, also, it should be observed that a principal reason for the limited development of the subject in text-books on descriptive geometry written in English, as compared with the larger French ones, is the time given in our technical schools to the elementary preliminaries and accessories of the department, which should be required for admission. These elementary subjects are plane geometrical problems, elementary operations with drafting instruments and materials (drafting manipulation), and elementary projection and perspective drawing.

Also, just here, those who wish to be honestly served should be informed that it is easily possible to fill great wall-space at exhibitions, with showy work on a large scale, which may, nevertheless, all be based on a very few and elementary principles, while work which is much less attractive to the eye may represent much previous hard study; in other words, may mean a great deal more.

But, besides this evidence, from the nature of the case, that descriptive geometry and its applications furnishes abundant materials for a full professorship in any and every high-class professional school of engineering and architecture, there is abundant precedent for this arrangement where such schools have existed longest, and are best known and appreciated; viz., on the continent of Europe; in France, Germany, Austria, Switzerland, Russia, and even Sweden, as shown in general by published programmes, and other sources of information, obtainable without special difficulty by those interested, and at any time within the last thirty years or more.

In particular, there is such precedent in the very strong comprehensive Polytechnic School at Zurich, in Switzerland;[1] in the Central School of Architecture, at Paris,—where, indeed, the subject is divided between two professors, although a considerable amount of elementary descriptive geometry is required for admission;[2] in the Central School of Arts and Manufactures at Paris, course three years, and where also as much descriptive geometry appears to be required for admission as is taught in some schools; in the Polytechnic School of Munich; in the Technical Academy at Berlin; in the Polytechnic Schools of Carlsruhe and Dresden, and elsewhere.

There is, however, little or nothing of English precedent to quote here. Excepting the work of a few leaders, often of other than purely English antecedents, everything must be subservient to what are called British interests, which means practically the worship of gold, power, and caste,—the national idols of that too much and too often prevailing element in England which all the world knows as John Bull, who proposes to rule everybody and be ruled by nobody, and who will send missionaries, or do anything else for you, if you will only do exactly as he says,—as witness the Chinese and all who cannot effectually resist, as the Afghans so nobly did twice within the last half century.

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[1] *Technical Education for the English People*, by J. Scott Russell, p. 145.

[2] Published conditions for admission for 1866.

Beginning, less than fifty years ago, with the insulting pittance of twenty thousand pounds a year for national education,—and even this was stoutly resisted,—the increase of that sum up to the present four millions a year has been fought for inch by inch. There is to-day; except three or four government institutions, hardly a higher technical school in the kingdom. Scott Russell, in his high-souled work, *Technical Education for the English People,* launched his generous enthusiasm with the energy of despair against the stolid apathy of his countrymen (now fourteen years ago); urging (p. 436) that the Commons should "vote funds for cultivating the people of our own nation, which shall bear some fair proportion to the sums voted for killing the people of other nations;" and complaining (pp. 172 and 306) that while the annual interest on the cost of past wars is twenty-five million pounds, and the annual cost of preparation for future ones is another twenty-five millions, and of paupers and prisoners seven millions more,—one million for education is grudged; and piteously asking (p. 390) why class schools founded only on money distinctions should be followed up by different buildings, schools, or seats at college,—one for the son of the so-called great, and another for the poor scholar of capacity and promise; and lamenting (pp. 140–42) the languishing condition of the very few technical schools which were founded by persons of other than English antecedents, or by the rare few who were in advance of their countrymen; also (p. 25), that Germany has six technical universities, while England had none; and, once more (p. 306), that, so late as 1868, it could be said, that "the contrast between England and Switzerland isthis: that England spends more than five times as much on pauperism and crime as she does on education; and that Switzerland spends seven times as much on education as on pauperism and crime." We may add that, in Norway and Sweden, the almost universal land ownership, and the absence of the folly of caste, conspire powerfully with universal education, to make pauperism and crime comparatively unknown.[1]

Still, in view of the well-known disposition of the English to "make haste slowly," and for fear of doing injustice, we may also add, that the growing enlightenment, under which the twenty thousand pounds of 1834 has grown to the probable five million pounds of to-day, for national education, may be trusted to work out the problem of English technical education, if not exactly by the Continental method. Indeed, returning for a moment to Scott Russell, he admits (p. 138) that every kind of knowledge is to be had in England somehow and somewhere; and that "the man who can help himself always gets help;" but still he complains that extreme notions on the subjects of perpetuated class distinctions and of personal freedom prevent a proper degree of comprehensive graded organization, so that opportunity shall be conveniently placed before everybody.

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[1] *Land of the Midnight Sun.* Du Chaillu.

The thoughtful and generous progressives, McCarthy[1] and Mackenzie,[2] similarly deprecate selfish aristocratic conservatism, and the stupid pride which scorns everything which it calls "un-English," as if to be that were, of course, to be inferior, superfluous, or bad. Moreover, what of popular educational progress has been made in behalf of man as man, as my brother and God's child, has largely been secured by "un-English" men, Forster, the son of a Quaker philanthropist; Gladstone, who, as well as Scott Russell, is Scotch; Prince Albert, who was German, and others.

But, dropping this digression, which may, however, well help to perpetuate, in a wholesome degree, "the spirit of '76," we think we have now sufficiently supported our main points: that the best polytechnic school should aim to provide but one comprehensive professional course; that it should free itself from preparatory and collegiate work, and only undertake professional work; that it is better to be independent of institutions of a different, though in no sense antagonistic type; that its graphical work, theoretical and practical, is one of its fundamental departments; and that this department affords abundant material, even when excluding its more elementary portions, for a full professorship.

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[1] *History of our own Times.*

[2] *The Nineteenth Century.*

THE EDUCATION OF THE INDIAN.

BY CHARLES F. THWING.

That is a bright page in the usually black history of the relations of the white man to the red, which tells of the attempt of the early settlers of New England to establish an Indian college. The Puritans of Massachusetts Bay, who founded Harvard, made a systematic attempt to extend the benefits of a liberal education to the aborigines. Instruction in Latin, Greek, and English was provided. Several of them, it is probable, entered the college, but only one ever became a graduate. Some students, after making good progress, abandoned their studies for a more congenial life in the forest. Others, who persevered, fell victims to that disease to which the Indian, when introduced to civilization, seems to bepeculiarly subject,—consumption. "Caleb Cheeshahteaumuck, Indus," now stands alone on the pages of the *Quinquennial* to represent the native tribes.[1]

That, also, is a bright page in the history of the Indian which, in the middle of the eighteenth century, describes the mission of Jonathan Edwards to the tribe dwelling at Stockbridge. Though the mission was not successful, the plans respecting it were wise. A house for a boarding-school was erected. Generous subscriptions toward the support were made in England and in the colonies. In addition to the rudiments of learning, the boys were taught farming and mechanic arts, and the girls "all sorts of women's work." Mr. Hollis, a name most intimately associated with the early history of our oldest college, "ordered twenty-four Indian children to be educated on the same footing, wholly at his cost."[2]

Despite, however, these instances, it is not till recent years that any comprehensive and systematic endeavor has been made to educate the Indian. The difficulties in the way of his education are the difficulties in the way of his civilization. These are many, diverse, and great. They arise, in general, from a state of savagery. I have heard a missionary to the Zulus speak of his delight when a native came to the station and asked for a *shirt*. The request showed that his mind was awake and progressing. But it indicates certainly a much greater advance for "Bear Ghost" or "Talking Crow" to come to an American Indian agent and ask for a book. The Indian loves hunting, the school interferes with the chase. The Indian loves roving, the school demands confinement. The Indian loves idleness, the school requires work. The Indian loves exhibitions of physical force, the school emphasizes ideas. The Indian loves change, the school necessitates permanence. The Indian seeks immediate results, the aim of the school is distant. The school offers what the Indian in his native state neither desires nor has the ability to appreciate in its full degree. But, besides these difficulties, inherent in the red man himself, other obstructions beset. It is not easy to secure suitable persons to establish and to teach schools for Indian youth. Life at an Indian agency, or among a tribe, isolated from society, dwelling on the prairie or in the forest, is anything but attractive. The compensation provided is frequently the merest pittance. The tenure of office, even if the teacher desires to continue to hold his position, is not permanent. His official superiors are not in many cases fitted to understand the worth or the importance of his work, and therefore either fail to coöperate, or place direct impediments in the way of its success.

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[1] *Quincy's History of Harvard University*, i. 191, 192. *Mass. Hist. Coll.*, First Series i. 172.

[2] *Life of President Edwards*, prefixed to his works, chapter v. sec. 1.

Yet it is plain that the Indian, as now circumstanced in this land, desires to secure the education of his children. With one exception, the agents, in their reports for 1880 unite in the assertion that the establishment of schools is favored by the red man. The agent at Pine Ridge, Dakota, writes, "There is a strong desire on the part of the Indians to send their children to school."[1]

Mr. P. B. Hunt, of the Kiowa, Comanche, and Wichita agency, Indian Territory, affirms that "the parents have shown an interest in the school, and have manifested an anxiety to have their children brought up in the white man's ways." The agent of the Flatheads, of Montana, reports, in 1880, that "a few years ago it was a most difficult matter to induce an Indian to allow his boys to be confined to a school-room; but a wonderful change has taken place, and the number of applicants . . . . far exceeds the appropriation for feeding, clothing, and taking care of them."[2]

The following letters, received by General Armstrong, of the school at Hampton, illustrate the interest taken by Indian parents in the improvement of their children. The naturalness of their style is quite as charming as their contents are gratifying. An Indian father writes:

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[1] *Report of the Commissioner on Indian Affairs*, 1880; 40. *Ibid.*, 75. [2] *Ibid.*, 110.

"Crow Creek Agency, January 14, 1879.

"My Son: I am going to write you a letter again. I want you to write letters to me often. I am glad that you are trying to learn. Don't run away from the school. It will be your own good if you learn. Do all the work they tell you to do, and learn to be a carpenter and a blacksmith. I would like to see how the Indian boys learn. The boys down there, their fathers would like to go down and see them. Then they would come back and tell the other Indians. Then they would like to send all their children. Learn to talk English; don't be ashamed to talk it."

Another father writes from Fort Pierre, Dakota:

"I want you to learn how to be a printer. I want you to learn to talk English. I would like to have you learn how to be a carpenter. I would like to go down there and see how you are getting along. If I was down there,—if I saw all the boys down there, then I would come back and tell the Indians, and they would all be glad. I hope some of the boys will learn to be a teacher, when they come back that they can teach the boys and girls. This is the only chance you have; get all the good you can. This is all I have to say."

From an Indian mother:

"Keshena, Wis.

"I am sorry you are not coming home next summer, dear child, but if you like to learn something it is a good place for you. Learn all you can; it will be for your own benefit.

Your affectionate mother, WANHANNO KIEIR,"

A father writes from the same place:

"Try to learn fast and study hard, so that you will be a smart man. Try to learn the trade of blacksmithing."

Schools for the Indian youth admit of various kinds of classification. In respect to their support and superintendency, they are either governmental, as organized and supported by the National Government, or missionary, as being under the direct charge of missionary societies. In respect to their method, they are either boarding-schools, in which the pupils are entirely separate from their home, or day-schools, in which the pupils study and write for a few hours each day, still remaining members of their households.

The Government has three classes of funds from which schools can be supported:

"(1). Appropriations made in fulfillment of treaty provisions which pledge either the payment annually of a specific amount for education or the support of specified schools.

"(2). Appropriations made solely for education, but made as a gratuity, and not under treaty.

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[1] *Annual Report of Indian Commissioner*, 1882; xxxix.

"(3). Appropriations made for general civilizing purposes, either in fulfillment of treaty obligations or as a gratuity."[1]

From these three sources four hundred and eleven thousand dollars were, in 1882, devoted to Indian education. Slightly more than one half of this amount was derived from funds appropriated to the general purpose of civilization. One hundred and thirty-five thousand dollars was the amount of special appropriation for education. It is interesting to note that, in the last six years, the amount devoted to this most important object has more than doubled. In 1877 it was one hundred and sixty-eight thousand dollars; in 1878 it was increased to one hundred and eighty-eight thousand dollars; in 1879 it rose to one hundred and ninety thousand; in 1880 it leaped to two hundred and ninety thousand; in 1881, it sprang up to three hundred and seventy-nine thousand; and in 1882 it aggregated four hundred and eleven thousand.[1] The increase indicates a policy wiser and more humane on the part of the Government than has usually characterized its action. The amount expended by the Government exceeds about twofold that expended by the various religious societies. In 1882 the total sum devoted to schools and missions by these societies was two hundred and sixteen thousand six hundred and eighty dollars.

Among the quarter of a million of Indians in the United States are not less than forty-five thousand youth who should be educated. In the last year less than nine thousand, less than one-fifth, were en-

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[1] *Ibid.*, xl.

	1877.	1878.	1879.	1880.	1881.	1882.
Appropriations made in fulfillment of treaty provisions which pledge either specific sums for education or the support of specified schools, . . .	$78,422	$81,056	$76,082	$75,950	$57,450	$52,627
Expenditures for schools made from general funds appropriated or held in trust for the support and civilization of Indians, . .	66,377	72,428	45,490	49,030	122,448	116,292
Special appropriations made for education, .	20,000	30,000	64,000	75,000	75,000	135,000
Expended from civilization fund for reservation schools, . .	3,885	5,135	1,984	25,228	36,606	16,901
Expended from civilization fund for schools at Hampton, Carlisle, and Forest Grove, .	. . .	. . .	2,669	26,992	65,748	89,104
Expended from Sioux fund for Carlisle school,	. . .	. . .	. . .	38,263	22,036	1,614
Total . . .	$168,684	$188,619	$190,225	$290,463	$379,288	$411,538

rolled as pupils in the Government schools, and the average attendance was slightly more than one-half of the actual enrollment.[1] Although the gain in attendance in the last six years is considerable, yet it is still true that more than four-fifths of the Indian youth are growing up in total ignorance. According to the last Census, nine and four-tenths per cent. of the white persons in the United States ten years old and upward cannot write; and of the colored persons of the same age seventy per cent;[2] but it is probable that more than eighty per cent. of the red men can neither read nor write.

The education which is afforded is mainly industrial. It is as much, or more an education for the eye and for the hand than for the intellect. It is concerned more with doing than being, more with economy of living than gaining culture. The rudiments of learning are taught, and advance is often made into higher studies. The use of the English language is the first and immediate aim. Reading, spelling, writing, and geography compose the principal subjects of study. But it is more important for the Indian boy to be taught to make a harness than to make a correct English sentence; it is more important for the Indian girl to be taught to make a dress than an accurate map of the State of Massachusetts. Whenever it is possible, therefore, the boys are obliged to learn some trade, and the girls some form, or all forms, of domestic work. The day-schools at the agencies are not adapted to furnish industrial training, but the boarding-schools are well fitted to develop mechanical skill. In these schools, also, most favorable opportunities are afforded for moral and religious instruction.

The training-schools established at Hampton, Virginia, and at Carlisle, Pennsylvania, have justly become famous by reason of the work which, within the last five years, they have accomplished for the Indian youth under their charge.[3] In 1880 a similar school was organized in Forest Grove, Oregon. The purpose and method of each are similar. The general aim is to civilize; and the general method is to teach the pupil to use his faculties of body and of mind in the gaining of a livelihood. The pupils, numbering the last year

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[1] *Ibid.*, xxxiii.

	Number of Pupils.	Average Attendance.
1877,	6,019	3,598
1878,	6,229	4,142
1879,	7,193	4,488
1880,	7,240	4,651
1881,	8,109	4,976
1882,	8,412	5,126

[2] *Census Bulletin*, No. 303.

[3] The School at Hampton also contains colored students.

four hundred and seventy-six, study much, but work with their hands more. The larger part work on the farm, and so learn agriculture; but there are apprentices to the trade of carpenter, printer, blacksmith, tinsmith, shoemaker, butcher, wheelwright, painter, saddler, tailor, and baker, — to the number, in 1882, of one hundred and eighty-three. Removed from association with their tribes, devoting all their time and energy to the purpose for which they were received into the school, surrounded by all possible means to insure progress in the training of the hand, of the mind, and of the soul, they develop towards, even if not into, a civilized state.

The same industrial training, though afforded under conditions less favorable, is given in the boarding-schools on the reservations. Fifty seven of such schools were in operation last year. In all, the teaching of agriculture is emphasized; and in many the trade of the carpenter, of the shoemaker, of the harness-maker, of the tailor, and of the blacksmith can be learned.

The advance which the young Indians make in learning appears to be quite as rapid as can be expected. Their faculties seem alert and vigorous. "I think," writes an agent from Arizona, "from actual observation, they will compare favorably, in intellectual appearance and brightness, with those who have been more highly favored." An agent of the Indian Territory affirms, remarking of the industrial schools, that "the progress made and results attained have exceeded the most sanguine expectations." Lieutenant Pratt, in charge of the Carlisle school, reports, in 1880, that "the progress in our school-room work is most gratifying. It is not too much to say that these Indian children have advanced as well as other children would have done in the same period. They have been especially forward in arithmetic and in writing."

Yet, despite natural aptitude and the advantage of the school, the Indian remains half-savage. He is still uncivilized, save as he is touched by the evils of civilized society. He is lazy, dirty in personal habit, nomadic, improvident, loving whisky, thievish, irresponsible, revengeful, respecting only a superior force. Doubtless, not a few of his evil characteristics he has learned entirely from the white man who sells him "fire-water;" doubtless, also, not a few of his characteristics, evil by nature, have been more deeply impressed by the white man, who debauches his wife and his daughter. The Indian has suffered wrongs of every sort,—wrongs of the basest iniquity. In his tribe civilization, therefore, makes slow progress. Yet progress is made, and before the last of the race disappears from the Continent over which he once roamed master, there is reason to hope he may become the equal in all the arts of living of his white conqueror.

For the gaining of this general purpose of civilization, it is plain that the school is an important factor. And for increasing this power of education, it is also plain that the schools should be made far more effective. Schools similar to those at Hampton, Carlisle, and Forest Grove, removed from the Indian country, should be established, to the number of a score. Additional boarding-schools should be formed on the reservations. Schools similar to the district school should be organized throughout Indian settlements. Attendance upon them should be made, as has been attempted at a few (and only a few) agencies, compulsory. In these district schools, the women graduates of Hampton and Carlisle, who on returning home are liable also to return to their former mode of life, can be employed with advantage to the teacher and to the pupil. All these schools should be furnished with the best equipment of buildings, apparatus. and, above all else, of thoroughly qualified teachers.

For the more speedy and thorough civilization of the Indian, the government, through its schools, should coöperate with the various religious societies in their missionary operations. These societies have missions among all the tribes. The Methodists, the Roman Catholics, the Baptists, the Congregationalists, the Presbyterians, the Protestant Episcopalians, and other denominations, support various stations in the States and Territories west of the Mississippi, as well as among tribes east of the river. Their aim is religious. Their schools and other agencies are subsidiary to the purpose of the conversion of the red man to Christianity. But it is ever to be remembered that Christian teachings and Christian influences are the most efficient instruments in the civilization of savage races. The Government does not teach the Indian Christianity. Such instruction may lie beyond its sphere. But the Government does aim to civilize the Indian. Therefore, unable of itself to use the instrument most effective in establishing civilization, it should coöperate with the various religious organizations in their missionary work. Upon this point the opinion of Commissioner Price, in his Report for 1882, deserves quoting, and commands our thought:

> "I am decidedly of the opinion that a liberal encouragement by the government to all religious denominations to extend their educational and missionary operations among the Indians would be of immense benefit. I find that during the year there has been expended in cash by the different religious societies for regular educational and missionary purposes among the Indians the sum of $216,680, and doubtless much more, which was not reported through the regular channels—

This is just so much money saved to the government, which is an item of some importance, but insignificant in comparison with the healthy influences created by the men and women who have gone among the Indians, not for personal pecuniary benefit, but for the higher and nobler purpose of helping these untutored and uncivilized people to a higher plane of existence. In no other manner and by no other means, in my judgment, can our Indian population be so speedily and permanently reclaimed from barbarism, idolatry, and savage life, as by the educational and missionary operations of the Christian people of our country. This kind of teaching will educate them to be sober, industrious, self-reliant, and to respect the rights of others; and my deliberate opinion is, that it is not only the interest but the duty of the government to aid and encourage these efforts in the most liberal manner. No money spent for the civilization of the Indian will return a better dividend than that spent in this way. In urging this point I do not wish to be understood as claiming that all the good people are inside the churches and all the bad ones outside; but a little observation, I think, will convince any one that a very large proportion of those who sacrifice time and money for the good of others is found inside of some Christian organization. If we expect to stop sun dances, snake worship, and other debasing forms of superstition and idolatry among Indians, we must teach them some better way. This, with liberal appropriations by the Government for the establishment of industrial schools, where the thousands of Indian children now roaming wild shall be taught to speak the English language and earn their own living, will accomplish what is so much desired, to wit, the conversion of the wild, roving Indian into an industrious, peaceable, and law-abiding citizen."

The question of the education of the Indian is, as has been suggested, closely related to the question of his civilization. Although education is a constant factor in our civilization, yet the peril in the case of the Indian is, that the educated Indian returning to his half-savage tribe, finding no occasion for employing his knowledge of making boots or manufacturing tin-ware, will relapse into the state whence he was taken, and in which his tribe has ever remained. It would, therefore, appear to be the duty of the Government not only to educate the young Indian for three years or five, but so to provide him with the opportunities for using his education that it may still be retained and made of constantly increasing service. These opportunities may be gained by treating the Indians, — not as paupers, feeding them at the public crib of annual appropriations from the United States Treasury, but by encouraging them to cultivate their soil, which they should hold in individual ownership, to raise cattle for market, and to buy and sell the various kinds of goods which they either produce or demand. We may indeed, to a degree, civilize the Indian by educating him, but we should also use every other means of civilization, that the education itself may prove to be of worth most substantial and permanent.

STATE AND SCHOOL: THE FOUNDATION PRINCIPLE OF EDUCATION BY THE STATE.

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THAT some close and important relation exists between the state and the school is obvious upon the most superficial observation.

Compare an educated people with an uneducated; it is to compare knowledge with ignorance, strength with weakness, civilization with savagery; in extreme cases, almost the man with the brute. Again, in the same state, say in Great Britain, compare the educated with the uneducated classes. Think of their homes, their pursuits, their pleasures, their very faces and expressions. Recall the intelligent faces and bright eyes around the evening fireside of a well-trained family, and the brute faces about a prize-fight.

Why is all this? What makes the difference? Very largely the modifying influence of the school. The school stands as a friendly border-land betwixt the state and a savage foe: if the school fail to encounter the infant hydra, the state must encounter the monster in its full growth. Nay, the enemy is within the very bowels of the state: in every household there are incipient foes. A constant influx of new life comes into the state, which needs to be moulded by the school while still plastic. The little savage of rapid growth — the *enfant terrible* — is by education to be converted into a citizen, peaceful and useful, or else grow up into an adult savage.

The work must be early and timely; it brooks no delay. Says Lord Bacon, "Commonwealths and good governments *do nourish virtue grown*, but do not much mend the seeds." These views show the importance of education, but do not indicate by what agency it is to be given.

We shall pursue the discussion under three heads, — The School, The State, and their Mutual Relations.

I. THE SCHOOL.

Let us endeavor to grasp the exact object of the school, its central function, — what Coleridge would call its *idea*. Manifold as is education and varied the aspects in which we may regard it, its central idea, to which all others are subordinate, is easily expressed.

Knowledge

Any large growth of knowledge is characteristic of humanity alone; no other creature is capable of it. The state itself would not exist without it. But is not *discipline* rather than *knowledge* the central idea of the school? Discipline is included in knowledge; it is in a large sense self-knowledge applied, — knowledge being truth in possession, virtue truth in action.

Exceedingly close are the relations betwixt knowledge and the state, knowledge being eminently social in its origin and growth. Animal progress is individual, and so extremely limited; human progress social and almost limitless. Its great instrument is

Language.

By means of language men exchange ideas; in this exchange there is a paradox, for, at the close of a mental exchange, *both parties have both ideas*, and, by the very necessity of stating them in words, both ideas in improved condition. Hence by mental exchanges, there being no loss but all gain, there arises a vast accumulation of ideas.

Another paradox: this common stock of knowledge, more miraculous than the widow's cruse, *grows by consumption.* Consumption itself is production in the world of thought. Such wonderful advantages attend mental wealth and mental exchanges. Language itself is twofold, — spoken and written (or printed). The spoken word quickly perishes; writing fixes it, print multiplies it. The vast accumulated stock of ideas and experience is stored in books.

To the great storehouses of knowledge education is the key. We pity the deaf and dumb, who have not the use of language: we build asylums for them. But the treasury of knowledge is chiefly in books; so that in a most intense and practical sense *the illiterate are deaf and dumb.* To educate them were indeed a charity. Is it no more? The absolute necessity of education is growing with every advance of civilization.

Whence is this indispensable education to come? First, it must come *from without.* This little red colored infant cannot educate himself, — most helpless of all creatures, unfit even for contact with nature.

From the family? Yes, naturally, largely, as far as possible. But mere parenthood does not qualify for the work of education: many parents can ill spare even the labor of the children.

Consider here a fundamental truth: the greater the need, the less the capacity to bestow education. This is true not of the family only, but also of the poorer sections and poorer classes. Need and ability stand in inverse ratio.

Voluntary association should do its full work, — strain every agency, and to all others add private charity, as illustrated by the noble benefactions of Peabody and such lovers of their kind. We bid them God speed, and thank them in the name of humanity.

But, after exhausting in their order all other resources, — self-help, the family, denominational enterprise, private charity, and all else, — still education, even in this age and in the most advanced countries, is nowhere upon a satisfactory basis of universality and efficiency, so that one can say it has done its utmost work for mankind. And, perhaps, we may add (amidst the growing complexities of civilization), that in this specific direction, in this utmost work of education, lie the dearest hopes and highest interests of humanity.

We need adequate resources for the very chiefest uses. Even with state aid, the consummation is distant and difficult; without it, whole generations will pass away before the present tardy processes reach the masses even of civilized mankind.

In the order of nature, indeed, the chief business of each generation would seem to be to educate the next; unless this duty is fulfilled, social degradation and decay necessarily follow. This leads us to our second head.

II. The State.

The central idea of the state is undoubtedly

Justice.

Justice, itself the central virtue, rendering to each his own, — to God, to Cæsar, to fellow-man, — is the centre. But what are the outer limits? Concerning these, there are wide differences of opinion.

What is the province of the state? No question was ever more mooted or ever more profoundly considered than at present; especially the relations of the state to education, far transcending all local and temporary issues, are pressing everywhere, even now, not only for decision but for action.

Federal and State.

The present aspect of the controversy is highly favorable, both on principle and authority. Indeed the battle is won: it remains to secure the fruits of victory and wisely to administer the duties consequent thereupon.

The weight of authority is overwhelming, embracing all but one school of thought, and dividing even that one, limited, yet able, school.

Both of the parties in interest are agreed, statesmen and educators In the United States, the Presidents, earlier and later, including Mr. Jefferson, the head and front of close construction, all vote "aye." So the governors of the States; and what is more, the constitutions of the States.

As with states, so with all the civilized countries, one by one, on the Continent, and in conservative Britain, now strongly committed to the doctrine in all her vast domains, increasing government provision has been made for education.

Mankind seems to have become everywhere awake to this great instrumentality, and recent advances have been made, wholly unprecedented, along the whole line.

Independent, disinterested thinkers are also almost unanimous. Time would fail to enumerate the publicists and political economists, the students of government and law, who concur. But it is useless to dwell longer on authority sustained by practical action and vindicated by results.

There is, however, a single school of close constructionists, powerful in name and argument, which opposes state aid to education in any form, represented in sociology by Mr. Herbert Spencer and by Bastiat in political economy, — a school which limits government strictly to the administration of justice, a school whose opinions and arguments are worthy of great respect and close consideration.

Not all even of the close-construction school, however, exclude education from the legitimate province of government. Mill, one of the most jealous of restrictionists, the author of the Essay on Liberty, includes education, and argues it with his usual ability.

Indeed, this restrictive view is my own standpoint. The subject was approached years ago from the point of view of a strict constructionist of the powers of government, ever inclined to suspect it, disposed to limit its province, and believing its usual vice to be excess.

The arguments of the restrictive school are well known, but have not convinced either the parties or the judges, either statesmen or educators or political economists, — such men as Mr. Gladstone, Huxley, and Fawcett.

Indeed, never before was there such growth of conviction or such practical action as since the promulgation of the adverse arguments. Thus the weight of authority is not only unshaken, but strengthened by the attack. Fully to discuss the conflicting views of government would consume our whole time. We shall only attempt to present what we regard the true view, which recognizes government as a social agency, of which the test is

Adaptation.

Fitness for the end in view furnishes the criterion as well for government as for any other agency.

To what, as an end, must government be adapted? To freedom, to the highest liberty of all. Its consummation would be the maximum use of one's own powers, — what has been called the *pleroma* or fulness of life in every citizen. This fulness of life is attained by (1) the utmost increase of power, and (2) the utmost diminution of resistance.

The state does not directly increase force; education, however, does, for knowledge is power, making nature subservient to man.

But the diminution of resistance effected both by the state and the school is enormous, by the removal of antagonisms. Conflicting forces are made parallel, especially social forces. Nothing so hinders a man as the opposition of another man. His human foe most shrewdly hurts, his human friend most wisely helps, him.

Unless government stands sentinel for us, all our time and pains are occupied in mere self-protection; we have no time for industry.

Without education, on the other hand, we have little skill for it. So do state and school work hand in hand toward like ends.

We come now to our last head.

III. The Relation of the State to Education.

This relation is that foundation principle which is the direct object of our search.

As we determined the central function of the school and of the state, let us now find the central idea also of what we mean by a foundation principle.

Is charity such a principle, or pity, or mercy? Alas, we fear not. These may be buttresses at the side; but in human affairs they are not the central idea of such a basis as we seek. *Interest* alone can supply that basis.

The foundation principle of education by the state is ***mutual interest*** founded on mutual service.

In the relations of state and school, the work of each is necessary to the other, and each is best qualified for its own share of the work. That of the school is preparatory and essential to the welfare of the state; the state is equally essential to the school. Justice must first be established before so peaceful an institution can prosper. The services are mutually complementary, and each does its part at a great relative advantage. The relation has considerable analogy to marriage, the state performing the sterner, harder, and more exterior duties and using force; the school, the gentler domestic duties, using reason and kindness. To develop the subject more accurately we present a general view in a few formulated theses.

Theses.

1. State and school are both institutions of a common principal, society.

2. In the preparation of men for the social state, the school is a necessary agency; with advancing civilization, this necessity constantly increases.

3. The interest of the state in this preparation is too profound to be left to chance; indeed, no legislation so involves the highest interests of society and of the state as that which concerns the education of the people.

4. While the state should avail itself of all auxiliaries, it must at its peril see to it that the work of its servant and ally, the school, is timely and properly done. It is under a *subpœna*, — "Herein fail not under a great penalty."

5. Education subserves the purposes not only of the best distributed justice, but of the most enlightened policy, and at the same time the harmonizing ends of the most tender mercy, the most melting pity, the most loving charity; and all these without their usual accompanying enervating influences.

6. Education is the profoundest security of the state within and without, the basis of wealth and strength, the chief means of prosperity and of recuperation from adversity.

An enlightened people is the only safety, the only solid bottom of national prosperity; and this is true *a fortiori* in a popular government.

7. While no wild, indefinite enlargement of the powers of government is to be favored, the study of the subject will induce a more and more profound conviction of the *fundamental character of knowledge in its relations to government as to all things else;* and especially

of the very near and intimate relations of knowledge to justice and liberty, — the great ends of government.

8. Admitting the importance of properly limiting the powers of the state, education supplies the best means of effecting such limitation. Among its numerous and incalculable benefits this is but one, yet one of inestimable importance; therefore, the powerful guns of strict construction may be captured and reversed; for

9. Maximum education gives maximum liberty, permits minimum government.

Knowledge on the part of the people governed, the principal, is the best and only security against their agents, the rulers.

The inclusion of knowledge is the exclusion of all that is wrong and the strengthening of all that is good in government. Usurpations and abuses seek darkness, they shun the light. Knowledge is as essential to self-protection against government as against any other power. Knowledge is ever associated with liberty, ignorance with despotism. There is no safety short of an intelligent criticism on the action of government. But for knowledge we should have no strict-construction critics to tell us of its excesses.

10. With an enlightened people the powers of government may to some extent be innocently extended, for with growing checks growing powers are possible.

11. An enlightened people is the best constitution of a state.

The central ideas of school and state, respectively, are knowledge and justice. Now the relations between knowledge and justice are wonderfully close. In the animal world there is scarcely any sense of justice, and little of it among savages: knowledge is a necessary foundation for it.

Knowledge prepares man for life, justice for social life. Education is the art of living, government the means of living together. The objects are almost the same. Knowledge and justice kiss each other. The methods of the state and the school differ; but the ends are the same. That of the school is superior, however, and most to be encouraged, for the state disciplines by force, the school by reason. The state governs from without, the school from within. Government from within reduces the need of government from without. Says Coleridge, "The necessity for external government to man is in inverse ratio to the vigor of his self-government."

The favored agency should be peace, not war; gentleness, not force; reason, not constraint. All these views are true and sound, regarding the state as a mere aggregate of individuals. But the argument is intensified beyond measure when we regard society in its true view, as an organism. The social organism is no mere figure of speech, it is a wonderful fact, full of important consequences.

We quote a powerful passage from a recent paper of Dr. Wm. T. Harris:—

> "As individual, John or James, each has a self — an ego, but a self hemmed in by limitations. In the organic form of institutions, man becomes a series of giant selves, each formed in the general image of man, and having its head, its hands, its deliberative power, and its will power to execute with. As such vast organism, man becomes infinite in respect to many points wherein the single individual is finite."
>
> "In the family, the inequalities of infancy, youth, maturity, and old age are mediated and balanced, so that the infant lives a rational life in full view of his destiny, the febleness of old age is provided for, the sick are cared for by the well, etc.
>
> "In industry, the lack of skill in one is annulled by the division of labor, and each one acquires the maximum of skill by the minimum of variety in the use of brain and muscle."
>
> "In the state, we find still greater results achieved. The nation never sleeps, never ceases to watch, think, act, provide, produce. Without the state, the social elements are all exposed under the cruel open sky; the roof of the state must first be raised before the other social elements can be protected."

The highest of all organisms is society, each element of which is itself a complex organism, a sociological unit, capable of manifold combinations. Vital forces are developed,—warmth, mutual sympathy, mutual action, and reaction; the effects of such interactions are marvellous,—even new social creatures. An educated state is such a new creature. What knows the savage of the daily life of civilization? of the morning paper, the evening book, the works of art, the sciences of nature and of life, the railroad and telegraph, foreign commerce, bills of exchange, the complex machinery of modern life? What thinks he of the great banking systems, the great transportation systems, the universities and libraries, the interdependent and related industries? For all these developments successive assimilations prepare the way. Even in the less complex organisms minerals are first assimilated by vegetables, these in their turn by grain-eaters, then by meat-eaters. The humble earthworm contributes no small share to the elaborate result.

The social organism being the highest, the children born into society are the blood thereof, which is the life thereof, each child an atom in the family molecule, which powerfully shapes and modifies it. The school next exerts its assimilating power, deals with the young and tender thing, too weak as yet for the giant hug of society, with its fierce and hard competitions. The school is an essential factor; the child trained at home alone is a hot-house plant left untrained, — a foreign substance in the body politic, raw, indigestible, to be endured or eliminated as may be cheapest.

States are reaching even now the nascent, self-conscious state. The precept, "*Gnothi-Seauton*," is applicable in its fullest sense to this huge organism. Sociology, as a science, has just dawned upon us, full of promise of high results, to be worked out jointly by men of action and men of thought. The men of thought must still take the lead, as Adam Smith, Spencer, Bastiat. A grand work for the state remains to be done, based on knowledge of the laws of state development. New problems are ever arising. Needed now, a Froebel of social laws, a Pestalozzi of the nations.

And now as to results. Accepting the most limited principle as to the province of government, viz.,

The Administration of Justice,

We see that education falls clearly even within it. Preventive not punitive justice. The object of that administration is the protection of person and property against foes, foreign and domestic. Applying this principle systematically by the tests of adaptation, proportion, economy, and all appropriate rules, we say that, for a given expenditure in education, both the people and the state, as such, will reap better and better distributed protection than by any other known form of expenditure; that the results will not only be remunerative, but can be made to yield a strict maximum of remuneration; *i. e.*, that the protection of person and property, through education, can be made the most thorough and economical possible. This protection will be most thorough against foreign foes, whether invading, or invaded: witness Germany. But a better protection is against the probability of war itself; and that is best afforded by education, which exhibits its horrors, and tends to put reason in place of force. People would not stand war if they understood it, — The best protection against sectional strife, — for this is founded on mutual ignorance. So the best protection against individual crime. This is proved by statistics, and founded on principle. Crime is prevented instead of punished. Society deals with the child in the tender age, to give it good principles, instead of with the hardened criminal, to punish bad actions.

Education goes to the fountain-head; begins at the beginning, at the proper age, cuts up the little weeds, cultivates in the spring-time, establishes the school instead of the prison, the teacher instead of the jailer or hangman; substitutes reason for force. Education protects also from pauperism, by fitting men for the competitions of life. It makes men self-supporting. Finally, it protects us from our protectors. The object of government is to protect citizen from citizen; of a constitution, to protect citizen from ruler. The best constitution is an enlightened people.

An educated people supplies better voters to choose their rulers, better critics to judge their conduct, a better and larger selection of rulers. They best know their rights, they best know how to maintain them. They are strongest to enforce the means. They are the best check on war, on unjust privileges, on discriminating taxation, on all forms of public plunder and peculation.

Thus might we go on with the comparison, item by item, for knowledge underlies all, — individual interests and social interests. It is the universal solvent.

Education is specifically the biggest possibility of all: on it hang the hopes of humanity. We argue not Providential designs and purposes; only this, that they travel this road to reach their goal. We entertain no Utopian views, expect no sudden revolutions, yet they come more rapidly than might be supposed, under less potent agencies.

There is room in the educational problem for the work of many statesmen and many thinkers for generations to come, and opportunity for the highest exercise of practical sagacity, as well as philosophical breadth and acumen. It is, indeed, a problem of the ages, with ever-varying conditions and the necessity for new solutions for each age, with the growing exactions of modern society and civilization. Perhaps as yet we as little understand what and how to teach as how to govern. Our knowledge of both will gradually improve. The great interests of mankind are harmonious, not conflicting. No two honest interests clash.

If this be true, it is a truth of marvellous comprehensiveness and power. To extend the genuine belief and practical knowledge of this truth is the greatest possible boon to humanity. The old maxim, one man's gain is another man's loss, is utterly false, wicked, devilish, the most pernicious doctrine born of hell. Yet the mass of mankind even now believe, and, what is worse, practise it everywhere. The very title of Bastiat's book, "Social Harmonies," is a treatise and a sermon. But we strain at gnats and swallow camels in the action of government.

Why can we educate for war but not for peace; educate soldiers — on the war power — but not citizens and voters. Have we no peace powers? Found asylums for the deaf and dumb and blind, but none for those blind to the sunlight of books, deaf and dumb to the chief language.

Consider the way in which governments really and habitually act. The enormous waste of force by war between nations, war between individuals,—this worse than waste, destruction instead of production,—is shocking, almost inconceivable. Consider the peace armament of Europe, its cost in money, its slavery of men; and all for what? All in the interest of malignity.

This very generation has wasted in war enough to educate and Christianize mankind. And what have we to show for it? Great God! what but infinite loss and ruin, tears and blood? The people perish for lack of knowledge.

Will men never cease to be savages? Never learn that love surpasses hate as the day the night? If there be constitutional impediments to the highest and best means of subserving the ends of government, by all means let them be removed, and, in doing this, get rid of many abuses and old rats' nests. The changes of one hundred years call for improved methods. God spreads before us his boundless universe as if he should say, "There is enough for all, enough for each: why will ye rob and defraud one another? Enter into the great common patrimony of my children." We say it reverently, Rob God! Rob the great common Father! He is not impoverished. Make common cause with God and man, and suck the bountiful breasts of nature. But when you have exhausted what you now know of nature, you have but just begun, for knowledge is infinite; and there is a higher enjoyment than that of nature, even that of society. *Society is God's greatest gift to man.* Intercourse with our fellow-men constantly evokes and develops new faculties and higher powers of nobler enjoyment.

Man must make the most of society and society of man, for either to attain perfection. Largeness of heart is needed as the sand on the sea-shore; and we can never embrace it all, for we are limited and our inheritance is not.

The entrance into this our patrimony is through the gate of knowledge, which lies hard by the gate of justice. To open wide these gates is the function of those allied agents of society, the state and the school. When the school has done its perfect work, there is little left for the state to do.

ORAL INSTRUCTION.

BY LARKIN DUNTON, LL. D.

INTRODUCTION.

IN the days of my childhood it was customary, at least in the neighborhood where I lived, on the frontier of Maine, to begin the study of English grammar by committing the text-book to memory. I remember well the two winters that I labored over Murray's smaller grammar book. Paragraph after paragraph and page after page were read over and said over till the whole book was fixed in my memory; so that, with very little prompting, I could repeat it from beginning to end. And I made no distinction in parts with reference to importance. Definitions, paradigms, lists of irregular plurals and of adjectives of irregular comparison, rules, and examples illustrative of rules and of definitions, all were committed to the storehouse of the memory as wares of equal value.

The accomplishing of this task was no doubt educationally profitable. It was a severe schooling of patience and of perseverance. It fixed the habit of attention and cultivated the power of remembering words as seen on a printed page; but "as the art of speaking and writing the English language correctly," or, indeed, as a means of understanding the science of language, it was a sad failure. No additional examples of the things defined and no new applications of the rules had been required, either in the form of written or of oral exercises. Indeed, no attempt was made by the teacher to secure an understanding of the text; so that when the book was all learned I had had no practice in composition, and was unable to recognize even the parts of speech.

This is, no doubt, an extreme example of text-book learning, pure and simple; but it is by no means a solitary one. I could quote dozens like it from my own experience; and it is undeniably true that there formerly was, and now is, in the country, a great deal of this kind of school work. It was accompanied by no teaching. The work of the teacher was to hear the lessons recited; and this was done with the book in hand, that there might be no undetected errors or omissions.

As, however, the principles of education began to be investigated, and the true methods of teaching to be made known, the harmful results of the practice to which I have alluded, considered pedagogically, began to be understood, and quite a general effort was made to substitute something better. The result was the introduction of object teaching, lecturing, and oral instruction generally. The text-book was thought to be the cause of the evil, and so it was proposed to cure the evil by removing the cause. Accordingly, text-books were largely banished from many schools. Astronomy was taught by lectures. Geography was learned from maps without names. The spelling-book was discarded. We had talks on history; and oral language lessons took the place of grammar. Some good beginnings were made in observation; but the teacher, in many cases, was too large a factor in this kind of work. Generally there was a maximum of talk with a minimum of study.

But it was soon found that information communicated in this way did not stick. Then came the mania for note-books and abstracts. I have seen the principal of a large school dictating grammatical rules and definitions to his teachers, to be by them in turn dictated to their pupils, written up in note-books, and committed to memory. And all this to avoid using a text-book! In some schools every teacher made her own spelling-book and wrote her own history and geography. And this is not yet an extinct species of folly. But what arrogance to assume that a better text-book can be produced by a tired teacher, pressed with her varied duties in school, than can be written by an experienced author at his leisure! But suppose it were as good, of what advantage is it to make pupils strain their eyes over indistinct manuscript, when clear print is so cheap?

It seems to me that we are in danger of such a reaction from some of the practices of to-day as will carry us too far in the direction of former errors; and it is on this account that I wish to put in a plea for oral instruction. The exclusive use of text-books is one extreme, all oral instruction is the other. The golden mean includes both.

Necessity for Oral Instruction.

Looking at the general question, now, from the subjective standpoint, let us inquire into the necessity for oral instruction.

All elementary ideas arise in the mind in consequence of the presence of the physical world around us or of the ideal world within us. No sounds or marks, that we call words, have the power, originally, of awakening ideas in the mind. The conditions under which it is possible for a word, whether written or spoken, to serve as the sign of an idea, are, first, the awakening of the idea in the mind by its appropriate object; second, the knowledge of the word; and third, the association of the two in the mind, the one as the sign of the other.

When these conditions have been fulfilled, then, and then only, has a word the power of bringing an idea into consciousness.

This granted, and it follows that it is impossible for books to speak to children till the words of the books have been learned; that is, till the ideas and words have been so associated that the sight of the one will recall the other.

Furthermore, written words are primarily symbols of spoken words. A child first hears a word, then sees its written form and learns the form as the sign of the sound and of the idea signified by the sound. No one would think of teaching a child to read written words that were not already known as spoken words. Whether it would be possible to teach a child to associate written words with ideas, independently of the use of spoken words, after the child had once acquired the power of speech, it is not necessary here to inquire, for, practically, it is never done; and certainly it would be a difficult task.

If, then, books are powerless to awaken ideas in the mind in advance of original observation and of a knowledge of words, children need oral instruction in observation, so as to secure as wide and varied a knowledge as possible of the elementary qualities of things and of the names by which they are designated.

Children need, also, oral instruction to secure that constant, lively, and varied action of the imagination which is necessary to its best development. The growth of the imagination is too often left to chance. It is frequently dwarfed from inaction, and often, on the other hand, stimulated to the wildest and worst activity. Again, from false treatment it is made to create false images, by uniting incongruous elements. This frequently happens, because the teacher is ignorant of the laws that govern its action.

It is a fundamental law of the imagination that it builds all its images with the proximate or ultimate elements of knowledge gathered in previous experience. If, then, the action of the mind in this direction is to be healthy, it must be required to construct those images only, the material for which is already in its possession. There are few ways in which young minds are more frequently injured than in making drafts upon the imagination which it is unable to answer. Vague and indefinite conceptions often arise from this cause, as well as confusion of ideas that ought to be distinct. And books cannot set the child right; for books are deaf, and blind, and heartless.

The living teacher, then, is needed to counsel, to direct, to stimulate, and to restrain, as well as to provide materials, to chose times, and to make occasions for the proper and systematic action of this power.

Oral instruction is necessary, too, in thinking. Thought is emphatically the knowledge of relations. No doubt all knowledge involves the perception of relations; and yet the distinction between the knowledge of objects, and the knowledge of the relations they hold to one another, is a valid one. It is one thing, for example, to know the working of the imagination, and quite another thing to know its relation to the powers of observation.

Now the condition of knowing the relation that exists between two objects is a knowledge of the objects in their relation. In other words, relations are known only through a knowledge of things related. The necessity of oral instruction by a living teacher, who watches the child's effort to think, now guiding, now encouraging, now restraining, must be obvious. How many mature minds are led astray at this point! How many often assume to know definitely the relation between unknown objects! I have known even respectable schoolmasters to have definite opinions as to the relative merits of two systems of education, neither of which was fully known to them. And it is not an uncommon thing to meet with members of our profession who are very sure of their knowledge of the relative value of two methods of instruction, only one of which is known to them. If men need checking and criticising and guiding, how much more children!

Again, children often need help in their efforts to think, in bringing related ideas or things distinctly before their minds, and in holding them thus till the relation in which they stand is clear. Take a case. Suppose you wish a child to discover the truth that the product of two factors is the same, whichever is made the multiplier. Place before him five horizontal rows of dots, with six in each row, so arranged as to make six vertical rows with five in a row. Set him to count them, and thus make sure that there are thirty. Let him count the fives, and then the sixes, so as to know for himself that five sixes are thirty and that six fives are thirty. Then, while he is conscious that the six fives are the same as the five sixes, both being present to his sense of sight, ask him which are more, and you have helped him to the thought by simply keeping before his mind the related objects in their relations. I suppose the fundamental difficulty in the solution of arithmetical problems with most children is the inability to represent to their minds clearly the conditions of the questions. How often it happens in such cases that a few simple questions, which bring distinctly before the mind the things of whose relations the problems treat, remove all difficulty!

And so it happens, in thousands of cases, that the voice of the living teacher, who comprehends the conditions of all thought, is the necessary guide to the formation of the best habits of thought. Early thinking, then, needs oral direction.

GROUND TO BE COVERED.

Taking it for granted now that the necessity for oral instruction has been established from considerations of a psychological nature, let us turn to the objective side of the question and inquire what subjects should be specially treated in this way in common schools.

Among the first subjects to be systematically developed by a course of oral lessons is that of mathematics, in the two directions of form and number.

The lessons on form should cover this ground, at least: recognizing and naming geometric solids, including the sphere, cylinder, cube, prism, and pyramid; a study of the surfaces of solids, so as to divide them into plane and curved surfaces, and to decide what kind of surfaces bound each of the solids studied; the shapes of plane faces, including the circle, square, oblong, and triangle, as seen in the cylinder, cone, cube, prism, and pyramid, respectively; the edges of solids for the observation of lines, both straight and curved, as well as for the direction of lines, vertical, horizontal, and oblique; the relation of lines, parallel, perpendicular, and oblique; angles, right, obtuse, and acute; a description of the several solids that are studied; a study and classification of the curvilinear figures, the circle, the ellipse, and the oval; a study and classification of polygons, including triangles, quadrilaterals, pentagons, hexagons, and octagons; a study of solids, for the purpose of classification, so far as to divide them into solids with curved surfaces, — spheres, spheroids, and ovoids; solids with plane and curved surfaces, — cones and cylinders; and solids with plane surfaces, — pyramids and prisms.

These form-lessons should be thorough enough, and should be continued long enough, to fill the minds of the children with the conceptions of the common geometric forms, both superficial and solid, to fix their names, and to make them familiar with the principles of classification and of logical definition. For the training of the mind to habits of exact classification and definition, perhaps there is no subject better than form, inasmuch as the generic and specific qualities can so readily be presented to the eye.

Oral instruction in number should appeal to the perceptive powers, the imagination, and the thought faculty, successively, step by step. Perceived objects should be numbered, added, subtracted, multiplied, and divided; imagined objects should be treated in the same way; and then should follow the operations upon the abstract ideas of numbers. Signs of numbers, both oral and written, should be used in connection with these three kinds of treatment. The danger from too protracted a use of objects is about as great as that from beginning the study of numbers with the learning of names and figures. The first two stages of the work, as here indicated, are to prepare the mind for the third; and, when the mind is thus prepared, the student should be allowed to advance, and not be kept marking time.

Nowhere is oral instruction more needed that in the natural sciences. A child, if left to himself, will pick up some of the elementary knowledge out of which these sciences are to be constructed; but his ideas will be limited in their range, and on many points vague, unless his observation is directed by one who is familiar with the whole ground.

As a preparation for reading treatises on botany, zoölogy, and mineralogy, there is needed a systematic, protracted, and well-directed observation of plants, animals, and minerals. Lessons on these subjects, when given at all, usually fail for lack of system. Weak, random talks, whether by teacher or pupil, about what is well known, are not a sufficient preparation for the study of books. All the elementary ideas involved in the treatment of the subjects by the books are to be acquired by the pupil's own original research.

Lessons on the human body should be included in a course of oral instruction. These lessons should cover the following ground, if not more: parts of the body, parts of the head, parts of the face, the neck, parts of the trunk, the arms, the hands, the legs, the feet, the eye and sight, the ear and hearing, the nose and smell, the tongue and taste, the sense of touch, the teeth, the skeleton, the muscles, the skin, the circulation, respiration, and digestion.

The immediate object of these lessons should be to give the pupils a knowledge of the human body,—of its parts, their relations and functions. The ultimate object should be to give them a reverence for their own bodies, and to create both the ability and the inclination to lead lives of temperance and self-restraint.

While these lessons, then, are to be based upon, indeed to consist mainly of, observation, the knowledge thus acquired is to be constantly supplemented by the teacher. Apparatus for this class of lessons is inexpensive; for each child is supplied with at least two subjects, himself and his neighbor.

Color lessons should not be omitted from this list; for, of all elementary ideas, perhaps no others constitute so large a part of the imagery habitually present to consciousness in our ordinary processes of thought as form and color. Not only form, then, but color, as well, would I make a special object of well-directed study.

Lessons on this subject should include instruction on the prismatic colors; tertiary and neutral colors; standard colors, hues, tints, and shades; production of colors; and harmony of colors. Each of these divisions of the subject should receive such special care that the eye would be well trained to perceive colors, the memory to represent them, and the taste to feel the influence of their harmonious arrangement. There is one phase of this subject that deserves more attention than it usually receives: I mean the naming of colors. I know of no department of human knowledge where names are applied more indefinitely than in that of color,—psychology and metaphysics alone excepted. It is well also to bear in mind that in this department, as in all others, time is a necessary condition of good training.

Vocal music, also, deserves to be mentioned in this connection. This is generally conceded. And yet there are those who regard vocal music as of too little practical value to be worthy of a place among studies proper for the common people. But if *practical* means, in its ultimate analysis, capable of producing happiness, then the objectors to music cannot have well considered the question; for the power of song is a perennial spring of joy.

Vocal music can be learned only from oral instruction. It consists of a series of sounds, varying in pitch, time, and timbre, and related to one another in harmony and rhythm. Not one of these qualities or relations can be learned otherwise than by the ear. It is true that we may learn the written signs of the sounds from a book; but then the signs will be merely the signs of the names. We may also learn the names of the sounds from a book; though, strangely enough, when we seem to have done so, the names we have learned are only the names of the signs; so that when we hear these names they awaken in our minds only the ideas of the signs of the sounds, and not the ideas of the sounds themselves. Sounds, which, alone, constitute music, can only be learned by hearing them. Oral instruction in music, then, should always begin with the teaching of sounds; and the relations of sounds in harmony, rhythm, pitch, and time should be taught by teaching the sounds in these relations. When musical ideas are clear and distinct in the mind, then names and signs may be taught that will really be names and signs of the elements of music. When this stage is reached, the pupil is prepared to read music without the aid of teacher or instrument. I regard the proper teaching of music itself as of far more importance than any question relating to systems of musical notation.

A plan of oral instruction should include lessons in morals. I know the discipline of the school-room is itself a great moral lesson; but still there are many duties that it does not teach, and many which, if left to chance, will never be taught at all. Let the duties of pupils to themselves, to the school, to society, and to God be carefully mapped out and the ground fully covered. Let example be followed by precept. Let instruction as to duties, and as to the results of their performance or neglect, be given. I care not whether these lessons come at stated times or not; I only insist that they be given. If this is done, the result will be more thoughtfulness and self-restraint on the part of pupils, and a race of better men and women; for conscience will be quickened by a knowledge of duty, and correct practice will ripen into habit.

Oral instruction in language includes, of course, the three departments of speaking, reading, and writing.

How shall we teach children to talk properly? Language lessons, so called, are frequently productive of no good results. Language is not an end in itself, it is rather a means to an end; and that end is the expression of thought. Will not this truth give us a clew to the method that ought to be pursued in teaching language? If power to do is acquired by doing, then power to talk must be gained by talking, —power to express thought by expressing thought. Of course, back of the thought lies the acquisition of thought, and the acquisition of language with which to clothe the thought. And what mean those years of silent hearing passed by every infant? What is then the occupation of his mind? He is observing things, acquiring ideas, and hearing names; thinking thoughts and hearing sentences. The same thought is in his mind, accompanied by the same oral expression, perhaps a thousand times, before he attempts its utterance himself. At last he begins to feel the power of that universal human impulse, which moves us to communicate to others the thoughts and feelings in our own minds. And then he is forced to speak. This, then, would seem to be nature's method of teaching children to talk: first, numerous impressions of truth and language; then, after patient waiting, and under the influence of an inward monitor, expression. If, then, the natural method of acquiring speech is to be continued with children after they enter school, this is the law underlying all elementary language lessons: make the thoughts so clear, the interest so great, and the words so well known, that the child will be forced from within to make an effort to express what is in his own mind. All lessons, then, based upon the assumption that the child is to make an effort to use language correctly, are out of place. The child's effort is to be to communicate his thoughts. Of course wrong expressions are to be corrected, and he is to be led to express the exact truth. But all mere sentence building, constructing sentences that shall include all the parts of speech, finding adjectives to fit given nouns, and nouns to suit given adjectives, making sentences after special patterns, constructing simple, complex, and compound sentences, — all such exercises, however useful they may be in studying the science of language, are not in place in a course of oral instruction, the object of which is to give the children the power to tell what they think.

The first lessons in reading are all oral; or, if the book is used at all, it plays a subordinate part. The successive steps in first lessons in reading may be as follows: the awakening in the mind of a distinct thought, either by the use of objects or by means of oral speech; the expression of the thought by the use of an oral sentence; the exhibition to the eye of the same sentence, either in print or script; the reading of the same, both by the teacher and the class; the reading of the separate words, by both teacher and pupils, till they can be easily called, both in the sentence and apart from it; the separating of the words into syllables, and the study of the syllables till they can readily be called; the learning of both the names and powers of the letters; learning to make the separate letters; the uniting of the letters to form syllables and the calling of the syllables; the joining of the syllables to form words and the calling of the words; the uniting of the words to form sentences and the reading of the sentences thus formed. Were we anxious for a new term, we might call this the analytico-synthetic method. It begins with the written sentence as the expression of a thought already expressed orally; analyzes the written sentence into its proximate, and, finally, into its ultimate, elements; shows the equivalent in oral speech of each element; teaches the pupils to form the elements, and then proceeds synthetically to reconstruct the sentence.

As sentences represent thoughts, the unit in the expression of thought is the sentence; as words represent ideas, the unit in the expression of ideas is the word; but as spoken words are composed of separate sounds, and as each sound is represented in the written word by a separate letter, or a group of letters, the unit in the written expression of sounds is the letter. If, then, the pupil, during his oral instruction in reading, is to be made to do habitually what he will be obliged to do without direction, when he comes to read new words and new sentences by himself, he should be required at the outset to recognize sentences and words not only as standing for thoughts and ideas, but also as the representatives of spoken sentences and spoken words; and he should also be made to know the letters as symbols of elementary sounds. Not till this last point is thoroughly made is he prepared to call new words without help.

The nature of the instruction required in penmanship may be inferred from the fact that to write a word with ease requires a definite conception of the form of the separate letters, and the habit of moving the pen in such a way as to make these forms. Securing the first point requires the production of the forms by the teacher, and the calling of the attention of the pupils to all the elements of the forms, while the habit of moving a pen in a given way is secured only by moving it in that way. Instruction, then, in regard to forms of letters, and also in sitting, pen-holding, and movement, is to constitute the work of the teacher. This is to be accomplished by combining class instruction and drill with individual instruction.

Oral instruction in composition should include the formation and criticism of analyses so as to make them clear and logical; the collection and arrangement of material; the division of the work into paragraphs, and of the paragraphs into sentences; proper punctuation, the arrangement of the composition on the page, and criticism of style. Reading and practice will do the rest.

I have now indicated briefly the work to be done, through oral instruction, in mathematics, the natural sciences, physiology, color, music, morals, and language. To these subjects I would add lessons on the general qualities of objects, whenever the teachers were competent to give such lessons. The object of this kind of work would be to form the habit of thoroughly observing everything that comes within the pupils' reach. It may be well to add that the list of topics here given is not intended to be exhaustive, but only to indicate those that seem to me essential to anything like a well-rounded preparation for a comparatively independent study of books. Indeed, I am inclined to go so far as to say that, in my judgment, a student is always helped in his reading upon any subject by a course of introductory lessons given by a thoroughly competent instructor. This is true of pupils in the higher schools as well as of those in the lower. These introductory lessons, or lectures, should accomplish two things: fix in the minds of the students, clearly, distinctly, and vividly, the leading conceptions of the subjects to be treated, and also take the students over ground enough, and secure such work by them as will make clear to them the right method of study and establish the habit of following this method.

PLAN OF LESSONS.

Let us now consider briefly the plan or programme of lessons that must be arranged as a condition of doing this kind of work effectively.

Education, in the fullest sense of the term, implies the complete and harmonious development of all man's powers. The accomplishment of all this requires the systematic exercise of all his powers. So the education of a child in any one direction implies systematic exercise in the same direction. Object lessons, language lessons, — oral instruction of all kinds has oftenest failed to accomplish the work hoped for by its advocates for a lack of a well-defined plan upon which it should proceed. A few lessons have been given upon this subject, and a few upon that, with no definite intent, forming no part of a matured scheme, beginning nowhere in particular, and ending anywhere in general. Striking the keys of a piano at random is not learning to play. Promiscuous lessons on a variety of subjects, or any one subject, result neither in scientific knowledge nor good mental training.

The first requisite, then, for good oral instruction in any school or system of schools is a definite programme. Who can make it? It is too often left to the individual teachers, and sometimes to the youngest teachers. This is wrong, for most teachers are not competent for this work. The making of a good programme, as has well been said by one of our wisest educators, is the most difficult of all educational work: it requires the greatest ability and the broadest knowledge; it should not therefore be intrusted to young teachers. School boards, as such, should never attempt it. It should be intrusted to a council of the ablest, the wisest, and the most experienced educators of the land. Ample time should be given for the consideration of every point of the programme, both in its direct effect upon the minds of the pupils, and in its relation to other subjects. No one branch of study should be admitted to or rejected from the programme, and the ground to be covered by no one subject should be decided upon, till the opinion of the wisest teachers of the world upon the point is known, and the question definitely asked and answered, whether the special conditions of the case require any modification. And when a programme is thus made it should never be changed, except after the most deliberate consideration and for urgent reasons.

Now what should such a programme determine in regard to a course of oral instruction? First of all, the subjects upon which the lessons are to be given. These will depend somewhat upon the social condition and home training of the pupils, the length of time they are to remain in school, and the pursuits in life for which they are destined. A boy who is to continue at school but a few years may need to be differently treated from one who is to take a college course and study a profession. All must learn to read, write, and cipher, whatever else is neglected. Secondly, the programme should determine the number of lessons to be given upon each subject. It is not enough to say, teach color and form; for one teacher may have a taste for the one subject, and another for the other; so that in each class the one or the other will be neglected. Thirdly, the topic for each lesson should be given. I see no other way to secure the full treatment of any subject. If left to themselves, teachers of different grades are in danger of handling the same topics; so that part of a subject will be studied several times, and part of it not at all. And, finally, the order in which the lessons are to be given should be determined. It is of the utmost importance that each subject receive an orderly and systematic treatment. This is the only way in which perception, imagination, and reason can be well developed; the only way in which pupils can be trained to good habits of study; and the only way in which the best knowledge of the subject studied can be secured.

It may be objected at this point that the specific directions by the programme here recommended would tend to trammel the teacher, and that more latitude should be allowed for the exercise of individual judgment. If every teacher was a profound philosopher, the point would be well taken; but, unfortunately, we are not all of that class. And, besides, I have supposed the programme made by the highest wisdom attainable. There is another incidental reason why I would have a definite programme of oral instruction. It is much easier for a non-professional to examine in text-book work; and, consequently, where education is directed by those not skilled in the work, oral instruction generally receives little attention. The result in many cases is, that this kind of work is the merest farce. But the most inexperienced member of a school board can ask whether a teacher has completed the programme, and require to have a specimen of the work exhibited.

AIM OF ORAL INSTRUCTION.

But programmes will never make good teaching. Back of all and above all is the living teacher. If he is intelligent, good, and earnest,. he does good work. One item of his qualification, in particular, I want to mention here. To be able to give oral instruction effectively he must know the true aim of the work. How often I have seen object lessons given when the teacher seemed to be merely fishing for words, —and fishing in a dry pool!

The true object of oral instruction I conceive to be threefold,—training, knowledge, and expression. It is possible to make either factor too prominent. We may make sharp intellects, that possess little valuable knowledge or power of expression; we may impart knowledge in such a way as to develop in our pupils little power either to think or to express; or we may make fluent talkers and writers, characterized by weakness and ignorance. Neither of these is the highest type of man. Perfection requires power, wisdom, and speech. It is not a sufficient recommendation, then, either of a subject of study or a mode of treatment, that it disciplines the mind. It is not enough that it makes the pupil wise, or that it makes him fluent of speech. The true test for every course of instruction, and for every lesson in the course,—and this is emphatically true of oral instruction, which fashions the mental habits,—is this: does it result in that self-activity of the pupils that gives them additional power to act; does the subject matter stand in such relation to human interests, and especially to the interests of these human beings, that the resulting knowledge will be of the highest practical value to them; and are they the better prepared to put themselves in communication and sympathy with their fellow-men? Oral instruction that will not bear this test should not be allowed to waste the time of pupils.

And here I might leave this part of my subject. But there is one error connected with oral instruction, in common with text-book instruction, so important, and at the same time so common, that I wish to point it out. I refer to memorizing the language of the instructor. It seems to me doubtful whether this practice is ever justifiable. As before said, language is for the expression of thought; and, if an oral lesson has not resulted in making pupils think thoughts that they wish to express, it might as well be considered a failure, and the language side of the lesson be omitted.

METHOD.

A few words on the methods of oral instruction, and I am done. The teacher's part in the lessons may be briefly described. He is, first, to furnish the material upon which the minds of the class are to be exercised, which may be material for the exercise of the perceptive powers, or of the imagination, or of the reasoning faculty, or of all together, according to the nature of the lesson. Secondly, he is to direct the activities of the children, both in the class and outside the class; for every lesson should require some outside work. Thirdly, he is to name the new objects, qualities, and relations that the children discover. And, finally, he is to teach the correct expressions for the truths discovered. This, let it be observed, does not require much talking. Were I to attempt to give a single formula, the observance of which would secure good oral instruction, it would consist of these words: *be silent.*

The work of the lesson, on the contrary, belongs to the children. This consists of two parts. The first includes exercises in observation, imagination, and thought. These are to be performed under the direction of the teacher. If the lesson, for example, is one in observation, the children are to observe the objects furnished by the teacher, and to observe the parts in the order directed; and then they are to observe objects, as directed, outside the class-room. If each child takes charge of himself, the teacher ceases to be a teacher. The second part of the children's work is the expression of the new knowledge they have gained. This should be done orally in the lower classes, and both orally and in writing as the pupils advance.

CONCLUSION.

I believe that in many schools in this country we are to-day acting as wildly, as irrationally, as foolishly, in attempting, through oral instruction, to relieve our pupils of the labor of overcoming difficulties for themselves by doing their thinking for them, as ever those old schoolmasters did, who fed their pupils on text-books from the beginning to the end of the year. If I must take my choice between all talk and all text-book, give me the text-book, and I will trust to future experience to make it comprehensible. And yet I believe that a course of oral instruction such as I have attempted to sketch is useful both as a means in itself of the best education, and as a preparation for the profitable study of text-books.

ON THE RELATION OF THE PROCESSES OF ACQUISITION AND MEMORY TO ELEMENTARY TEACHING.

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MY theme is akin to some that have been discussed in some of the other departments of this Association, and especially to one elaborated with great ability and power in a paper entitled "The Limits of Oral Instruction." That very suggestive paper has set me to thinking of the signification of the terms *analysis* and *synthesis*, words used to name two methods of obtaining knowledge.

It is said that "There are two methods for the mind to employ in obtaining knowledge, the analytic and the synthetic. The use of the first requires the object of knowledge, with all of its parts and elements and relation of parts, to be before the mind of the learner at the first. When the mind has known the object as a unit, it is to unloose the parts from one another by analysis, and consider them in themselves and in their relations.

. . . .

"The movement of the mind in the acquisition of knowledge must always be from whole to part, if we would prepare the mind for the independent and successful activity in the study of any object or branch of knowledge. A synthetic method of independent study is impossible."

"The primary requirement is that the object of knowledge, with all of its parts and elements and relation of parts, shall be *before the mind* of the learner at the first. *To be before the mind* may mean that the mind already has a vague, or not clear, "knowledge of the object, its parts and elements and relation of parts"; or it may possibly mean that the object is in such proximity to the mind or senses that the mind can contemplate it. The latter interpretation would seem to limit the objects of knowledge to objects of sense. If the former is the proper interpretation of the meaning, it would seem that the process of acquiring knowledge of an object must start from knowledge previously acquired. Then the question arises, "By what process was this knowledge obtained?" If the second is the proper interpretation, then the question recurs, "By what process does the mind gain its first knowledge of an object?" The character of this first movement it seems important to clearly see. Sir William Hamilton gives the following as a psychological law: "The first procedure of the mind in the *elaboration* of its knowledge is always analytical. It descends from the whole to the parts, from the vague to the definite." He adds, "These two processes, synthesis and analysis, are not, in strict propriety, two several methods, but together constitute only a single method." A conscious activity of the one is impossible without there being at the same time a more or less conscious activity of the other. He says further: "It is manifest in general from the meaning of the words that the term 'analysis' can only be applied to the separation of a whole into its parts, and that the term 'synthesis' can only be applied to the collection of the parts into the whole."

It is evident that in the elaboration, *i. e.*, the *perfecting* or *refining* of its knowledge of an object, the mind naturally proceeds from a whole vaguely known to the parts composing it. But this assumes that the mind already knows a complex whole. The process by which the mind originally constructed that whole must have been a synthetic process. There seem then to be two processes by which the mind naturally gains knowledge of an object: one process, which results in the knowledge of elements that are wholly new and the joining of them to the elements already known; and another, which results in a clear knowledge of the relations of these elements. "To know an object is to be certain that it *is*, and to be certain of its relations to other things, and of its parts to each other and to the whole."

Whether any particular process of acquisition should be termed analytic or synthetic would seem to depend upon (1) what the whole process starts from, and (2) what is the immediate end sought by the instructor.

1. Every object which furnishes an occasion for knowledge to the pupil, and for instruction to the teacher, may be viewed as one of three different wholes. (1.) One of these is the object as it really is, — what the Creator sees it to be. (2.) Another is the whole composed of those elements which the teacher sees in it. (3.) What the child sees in the object forms another whole.

Let us suppose, by way of illustration, that a mind without any experience in knowing, and therefore without any power of using the knowledge gained by one sense as the sign of knowledge that another sense would give, should set out to gain knowledge of an apple. By applying the sense of sight, a knowledge of form and color is obtained. These are all the attributes known by sight. Since the form is space-filling, it can be separated into parts. There is an involuntary or spontaneous act of synthesis performed which unites these two elements into one spatial whole; but no analysis of the whole will give *flavor*, or *hardness*, or *smoothness*, or any other attribute of the apple.

There are new and independent elements given by other senses and by the process of synthesis united with the elements already known, forming a more complex whole. It is true that with every act of synthesis there is an accompanying act of analysis. It is impossible to perform one of these acts without at the same time performing the other; but the process of which the learning mind is most conscious seems to be the synthetic. After the child has learned to perceive, and can make use of the acquired perceptions (so called), his act of spontaneous synthesis gives him a much more complex whole, the knowledge of which is made clear by analysis. It seems to be true also, that when the mind is engaged in the study of the elements or parts of a thing, the conditions are most favorable for the discovery of other elements or parts not previously known, which, when discovered, are at once united with the other elements, forming a new whole.

If we occupy the point of view of the instructor who is striving to lead the child to construct or synthesize a whole similar to the whole which he knows, then the process seems to be prominently analytic. Every movement of the teacher's mind with reference to his whole is an act of separation. But, should he chance to discover some new element, he immediately unites that in its proper relation to the other elements, and thus constructs a new whole.

Nor does it seem to be different in learning complex abstract notions. A mind that knows nothing about the state cannot learn anything about it by pursuing rigidly a process of analysis of any whole with which it may start. Suppose that it starts with the word. Its whole is simply an empty form. The process by which that form must be filled is pre-eminently a constructive, a gathering-together process, rather than a process of separation. It is by the study of the relations of the elements found to be in a thing, and of the relations which the thing as known holds to other things, that new elements are brought to view; and in this sense it may properly be said that the analysis supplies conditions favorable to the acquisition of new knowledge.

2. Whether the process of the mind is consciously analytic or synthetic depends, in the second place, upon the nature of the immediate purpose sought to be realized by the instructor. If the end is the acquisition of new knowledge, the process is synthetic; each new element being joined to the old whole by a synthetic judgment, — synthetic from the learner's point of view, but analytic from the standpoint of the teacher. If the immediate purpose is to make the learner's knowledge clear, — to make that which is vague and indefinite clear and definite, by which is meant a seeing of each element

or part of the complex whole in its proper relations to the other elements or parts, — then the process is consciously analytic.

The inductive method is analytic rather than synthetic. By it we proceed from the particular to the general, — from the complex to the simple. The deductive method is prominently synthetic, the mind proceeding from the general to the individual, from the simple to the complex, the general notion ever being less complex than the particular under it.

I now pass on to the consideration of the relation of memory to elementary education.

I shall not consider memory in that special sense which limits it to the power to *re-know*, — to recognize old acquaintances, past experiences, — nor in that other sense, which limits it to the power to reproduce those general notions, which are the products of generalization, and are put under the arbitrary forms of language, but shall give to it the more popular signification of that endowment of the mind which retains and recalls past experiences.

By elementary education, I mean the exercise of that class of mental processes which result in products which we call facts. It differs from scientific education in that there is but little or no conscious study of the logical and necessary relations of these facts by which they are bound together into that unity which we call a science.

By a fact, I mean a synthesis of elements which the mind gathers together and views as a whole, and not as a stage in a process. The universe of mind and matter is an organism. The law of its being is activity. Every thing or fact that is at any moment of time is some stage of one of the infinite variety of processes or movements toward some definite end. It was conditioned by all that preceded it in the process, and it will be the condition of all that follows it. But when cut off from what has preceded and what will follow, and viewed as a whole and not as a part of some great whole, it is a fact. Facts seen in their logical relations constitute science.

Elementary knowledge rigidly defined is a knowledge of these facts as facts. Scientific knowledge is a knowledge of these facts as necessarily related to their antecedents and consequents in the process. Elementary education is, therefore, a leading of the mind to perform those processes which result in elementary knowledge.

But it is needful that we guard against the misconception that there is any period of a person's life when the process of education will be exclusively elementary; when he will deal with facts independent of their relations; when he will be unable to make any generalizations or inductions. Certain it is that there is no such period after he enters school.

He must generalize before he can make any intelligent use of language. Every word names a general notion, and not a particular. This power of generalization and of induction, by which what is common in the particulars observed is extended to those not observed, is possessed by every child of school age. There is therefore no period of a child's school life in which he is wholly incapable of scientific education. The logical power is weak in early childhood, while the powers of observation, memory, and imagination are relatively strong. The wise teacher makes use of what nature has furnished, and is content to wait for what will not be given until another period.

Having explained what is meant by elementary knowledge and education, I now pass on to a fuller elaboration of the definition of memory.

Memory, as defined above, admits of a separation into different species: —

(1.) There is the *spontaneous* and the *intentional* memory, differing in this, that there is a conscious activity of the will in the one that is not in the other.

(2.) The conscious and the unconscious memory. By unconscious memory is meant that power of the mind to retain its acquisitions and assimilate them so that they become, in a sense, a part of its substance, forming an important element of that complex whole which is called character. It helps to form the soil from which ideas spring when occasion calls for them, the reservoir from which are drawn the materials for reflection and into which many of the products of reflection and observation flow. It is the great conservative power of the mind ; nothing that goes into it is lost. It may never afterwards appear in consciousness in the form in which it sunk into unconsciousness, but it is an abiding ingredient of the soul, modifying its capacities and powers.

(3.) There is also a memory of the objects of sense and a memory of objects of reflection. Under sense, memory is the memory of the eye, of the ear, and the like. The memory of the eye may be a memory of form or of color. Reflective memory has under it, memory of processes, of results, of laws, of causes, of similars, or generals, etc. So independent of each other do these powers seem that Beneke declares that memory is not one faculty, but many, and that the cultivation of one memory has no effect upon another.

Of the relative importance of conscious and unconscious memory in education, much might be said. It is a prevalent error among teachers to undervalue the latter. Many school practices and require ments emphasize the importance of conscious memory. This is well. There are few or none that suggest to either teacher or pupil that what he once knew but has now forgotten is not lost. This is not well. The influence of examinations and class records, and the determining of rank by per cents, are to teach that what cannot be called back into consciousness of what has been learned is of no value. This works the evil, especially in the higher schools, of contracting the field of view of the student, and of causing him to expend his mental energy in recollecting when it might better be expended in assimilating. What is merely recollected still continues to be objective, and, in a sense, foreign to the mind. What is assimilated passes on into character. For this reason it is not strange that the man who leads his class by the examination test often follows far behind when he comes to be judged by the tests that society applies.

I would not be thought to undervalue examination tests, but, rather, to urge the application of such other tests as shall lead the pupil to a just appreciation of the unconscious possessions of the mind.

We are wont to say that the condition of memory is that the object shall first be known; and that to know, the mind must attend; and that attention is conditioned by a feeling of interest. But original knowing, beyond the slight and superficial knowledge which sense, perception, and consciousness enable the infant to experience, — which knows the thing only so long as it is before the senses, — is dependent upon the memory. Without memory, mind could perform none of its other functions. It is, therefore, fundamental to all knowledge.

"Memory is the great keeper or master of the rolls of the soul, — a power that can make amends for the speed of time in causing him to leave behind those things which else he would so carry away as if they had not been."

The "old education" was probably wrong in some of its practice, but it was orthodox in doctrine when it taught that the mind should be early furnished with a store of true and noble forms which the future is to fill with their proper content.

In considering the relation of memory to elementary education, I remark: —

That, during this fact-acquiring period, the faculty of memory is especially active, particularly that phase of it which recalls individual objects, — the recollection.

Nature has provided that, during this period of comparative inactivity of the understanding, the mental energy shall be employed in the storing up of material for future elaboration. It is the period of the acquisition of forms of knowledge having a small and vague content. These forms of knowledge may be either forms of things in nature, or words, — which are artificial forms of knowledge. The natural forms of knowledge are obtained by the perception of material objects. The child perceives a pebble. He acquires a form like that which the scientist or philosopher has; but how empty is it compared with theirs. He sees only the skin of the thing; a natural skin, it is true, but it has hardly a greater content of knowledge than has a word the meaning of which he does not possess. And this skin is all the child at first cares to know. He attends to it for a moment, long enough to seize it, and then rushes on to some new acquisition. He may inquire what it is, but his question is answered when he learns its name. He has neither inclination nor ability to make an exhaustive study of the pebble. Any effort to force him to do this will result either in failure or in mental deformity.

In learning oral language the child learns to associate the visible form of the object with an audible form or sound. In learning printed language the association is made between two visible forms. This association being made, it will then follow that when either of these is presented to the mind the other will be recalled.

The question is suggested, What is the order in which the child learns words or audible forms? Is it first the thing or natural form, and then the word or artificial form; or, is it first the word and then the thing?

The movement of the mind in *inventing* a language is from the thing to the name. Is this the only proper order of procedure in *learning* a language? Observation of the process by which a child learns to talk will show that the movement of the mind is quite as often from word to thing as from thing to word. Reflection would lead to the same conclusion. The word is a thing or audible form; while the object, pebble, is a visible form. What the mind must do is to associate these two things as name and thing named. There is no psychological law that requires that the mind shall invariably proceed from one to the other rather than from the other to the one. It would require half of a lifetime to learn to talk as well as a child eight years of age, if consciousness of the necessity of a word were made to precede always the learning of the word.

In the acquisition of knowledge from the printed page, or by oral instruction, the movement of the mind is from word to content. "But shall the child learn words the meaning of which he does not understand? This is mere verbal memory, the besetting sin of the old education." Shall the child learn to repeat any Bible texts, or gems of poetry or prose? In doing so he will learn to use many words that convey to him absolutely nothing of their true significance, let the teaching be ever so skilful.

I formerly knew of a boy who is now an intelligent and valued member of society, who early learned to repeat the text, "The wicked flee when no man pursueth, but the righteous are as bold as a lion." For years he interpreted "the wicked flee" to mean a wicked flea. It would seem that he could have had no conception of the meaning of the text; and yet I believe that in the final outcome it was quite as well for him as it would have been had he spent the time required to memorize the text in a microscopical examination of the insect which his fancy pictured.

I am no advocate of mere verbal memorizing at any stage of one's education; but there is a Scylla quite as fatal to true progress as this Charybdis.

The impulse to make a language is an instinct of the soul. The child is naturally impelled to learn the language which is constantly used in his hearing. There is no apparent reason why he will not seek with as much interest to discover the content of a new word as to learn the name of a new thing. It is not material in what order these are presented. The essential thing is that the child put the best content he is able to form into the word at the earliest moment practicable. The teacher should avoid a literal and narrow interpretation of the dogmas, "Things before words," "The consciousness of the need of a name before giving the name," lest he impede the spontaneous activity of the child, which drives it on to accumulate a store of outlines or moulds of things which future elaboration by the higher powers will fill.

A teacher may be of great service to the pupil at this early stage in his education, provided he does not fall into the error of thinking that everything which the child has known during the term must be at his command, ready for reproduction on examination day; or, that everything which the child learns must be known to the pupil as it is known to the teacher; or, that there is some fixed and necessary order of procedure which requires conceptions to precede words, or words conceptions; or, that the higher powers of comparing, generalizing, classifying, judging, and reasoning are not active in very young children; or, that the study of a book for the purpose of interpreting its language may not be quite as valuable an exercise for the child as a study of the physical properties of the material object.

Prominent among the instrumentalities used by the teacher to lead the pupil to acquire and retain facts and experiences is the text-book. One needs to keep constant guard over himself to avoid a too implicit reliance upon much that is put forth under the supposed sanction of philosophy upon the use of text-books. The logical result of some of these teachings would be the abolishment of the book from the school.

One of the prominent leaders of educational thought in America says: "Books in abundance may be used, and lectures may be given, but they are to be used to call the mind of the student to a fresh and more thorough study of what has before been taught; they are not to be used as the" (student's) "original sources of knowledge." It is in books that we find recorded the thoughts and experiences — the achievements — of the race. Without a knowledge of what has been found out, each one must begin where the race began, and by the slow process of discovery achieve what he may. Each generation would merely repeat the experiences of its predecessor. That in which the world to-day differs from what it was a century or sixty centuries ago is to be found recorded in books. What it is to-day is what its different institutions are. But these are only the embodiment of the thoughts of the past. When we study them we are merely discovering what those have thought who have gone before. The actual institutions of society are, in a sense, books containing the record of former generations.

The great value of a book seems to be that it enables one to realize within himself the essential thoughts and experiences — the spiritual achievements — of the race in much less time than was required for their original production.

A rational study of a text-book causes activities of soul in the student similar to those experienced by the original discoverer. In so far as he experiences their thoughts and feelings, he is doing what the original discoverers did; and, what is more to the purpose, he is being trained in a right method of thinking.

In the text-book is preserved the essential truths which mind has discovered, and the relations of these truths; and these the learner may seize and appropriate without the waste of energy attendant upon the exploration of ways that lead to error, into which the original discoverer was led because of his ignorance. It is through books that the present generation is able to rethink for itself what has been thought in all former times, as a preparation for the forward step in the progress of the race which it is to take. It would seem, then, that the type of school instruction is that which has for its purpose the preparation of the pupil to take possession of this inheritance by teaching him how to master books. But this does not imply meaningless rote-memorizing. The mastery of books means the mastery of the meanings of words and of thought processes. This can best be done through objective illustration and a practice in the application of these processes to the solution of new problems. A text-book is mastered when the student is master of its ideas and processes; nor does it seem to me that the influence of such teaching is merely to "prepare the mind to understand, it may be, what others have done, but gives it no power to do anything by an independent exertion of its own powers."

Progress toward reform in school teaching will be made, not by abolishing the use of the text-book, nor, as it seems to me, by refusing to make it an "original source of knowledge to the pupil," but by a more rational teaching of it. There is quite as large a field for training "the active powers" of the intellect in seizing and assimilating the thoughts and processes from a printed page as from an object of sense. The condition of progress in both cases is that these thoughts and processes shall be seized and assimilated. What is wanted is not *less* use of text-books, but *better* use of them by better teachers.

Facts of acquisition and memory may be classed as material and spiritual. A material fact is the material object or thing as known. A thing is an embodiment of the fact. A spiritual fact is embodied in the artificial form of words. Either form of expression, as has been already said, conveys to the unlearned but a meagre notion of its full significance. Each person puts into it what is in himself and no more; but, if stored up in the memory, it serves as a nucleus about which other ideas may gather, and into which a larger content may come.

Mr. Payne has said: "Memory will hold in charge many things which are imperfectly understood, formulas whose meaning is obscure, abstract truths which await their explication, definitions to be made clear, sentences which do not transmit the thought of the writer, empty words which are to be filled with meaning, isolated facts which require classification."

Another has said, "A downright scholar is one that has much learning in the ore, unwrought and untried, which time and experience fashion and refine."

THE TRUE PLACE OF A NORMAL SCHOOL IN THE EDUCATIONAL SYSTEM.

BY HON. D. L. KIEHLE, STATE SUPERINTENDENT PUBLIC INSTRUCTION,
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THE true place of an institution, as of an individual, is found, *theoretically*, by discussion ; but practically it is found by asserting itself in its ability to take and to hold the position it claims, "possession being nine points of the law."

Discussion is, then, both profitable and natural at the time of or preceding the practical demonstration of the power of the institution to settle questions not at the outset anticipated.

It would not, however, be to the credit of the responsible advocates of normal schools, nor to the advantage of the schools themselves, that this question of their true place should too long be a matter of controversy ; for, if the representatives of education do not yet agree upon the place the normal school should fill, it will not be a surprise if the people, who know more of their cost than their profit, should be in doubt whether, indeed, there is any legitimate place for them, and whether they are not an intrusion and an unnecessary expense.

I must begin this discussion by expressing the judgment that we are quite near the time when this theme should be superseded by others pertaining to the development of the system ; and yet, in view of the unsettled policy and very diverse character of these schools, and the unstable relation they sustain to the system, I am as well satisfied that there is a demand for serious inquiry into the causes of present distrust, and why normal schools have not proven their right to position by taking it and holding it in undisputed possession.

In determining what the orbit of a new planet is or must be, the astronomer takes into his estimate certain fixed data of gravitating tendencies never to be lost sight of. So, in estimating the probable course of any new institution, there are certain social gravitations or tendencies which may always be reckoned upon to dispose it to certain fixed forms. Of those that apply to educational institutions I mention two.

First is the conservatism of habit. What men have *done*, and have believed, is what they are determined to hold to as what ought always to be done, and must still be believed. Intelligence and learning have by no means annihilated this rank conservatism among educators. Teachers of schools have been as set in their forms of work as ever priest or Pharisee in the dogmas of his faith or the form of his worship; and only some fearless reformer with the spirit of Elijah can compel progress. To know how far reason and reasonable methods have prevailed over prejudice, hear what is said by the author of the article Education, in the last edition of the "Encyclopædia Britannica": "Schoolmasters are still spending their best energies in teaching subjects which have been universally condemned by educational reformers for the last two hundred years. The education of every public school is a farrago of rules, principles, and customs derived from every age of teaching, from the most modern to the most remote."

Now the normal school is the child of the reformers. It is expected to make new paths, to defend new truths; and, in doing this, it must face the opposition of conservatives. But, as normal schools have gained standing, and their teachers have been paid good salaries, the tendency has been to receive men as teachers who have no loyalty to any normal-school doctrines except that teachers should be well paid.

The result in this case has been that normal schools have lost their freshness and vigor. Books are studied instead of things and laws, words are recited, but no ideas or judgment expressed. Pupils may become scholars, but not teachers. An ambition may be fostered to learn a science or practise an art, but not to teach school; in truth, the school falls into the common rank of academies and high schools.

A second gravitating influence is the spirit of aristocratic exclusiveness.

Every man finds it in his nature to associate with his equals or his betters, in preference to those beneath him, either in station or intelligence. So in education, schools had long been open to the wealthy and noble, and universities, as at Prague, Oxford, and Paris, were crowded with students long before Christian philanthropy moved teachers to serve the masses, or to study how children should be taught. In the history of normal schools this disposition can be reckoned as a constant quantity. They will show a continual tendency to ally themselves with higher education and neglect the elementary; they will aspire to a good name for the higher academic, rather than to the self-sacrificing work of promoting primary instruction by better methods and more thoroughly trained teachers.

I name these as diverting tendencies, which go far in accounting for the irregular development of normal schools and the questionable position they still hold in the educational system.

With this prefatory review, I proceed to show the true place and character of normal schools as indicated by the demands of the civilization that called them forth.

The first demand is of that which is known as "The New Education."

When training demanded development of powers, mental, moral, and physical, by which the pupil might sustain an independent relation to the world, gaining ideas by his own observation and forming judgments by his own reason, then it appeared that teaching is a high art, that a scholar is not necessarily a teacher, that learning symbols of ideas or judgments does advocate and is representative of the new education. Its chief end must be to make teachers practically familiar with the laws of the mind, the order in which its faculties develop and mature, the best practical methods of directing these growing energies in observation, memory, imagination, language, and reason, together with giving them such practice under criticism as will enable them to execute according to their theory. Of course this is only reaffirming what has come to sound almost trite, — that normal schools must be characterized by their professional work.

I have known so-called normal-school men who have defended the academic character of their schools and the quite entire absence of professional work on the plea that we learn best how to teach by being well taught; that is to say, that normal schools have no distinctive work separate from that of all good schools, or that no good teaching is done outside of normal schools, these having been established to furnish the world a proper standard, — an assumption both gratuitous and offensive.

Again, very immediately related, is the responsibility of normal schools in elementary instruction. But while learned doctors were leading thought in the great universities, and doing great things with great subjects, philanthropists, as Rousseau, Comenius, Pestalozzi, and Froebel, gave their best thought to the children, and in reward have gained names that will be held in honor as long as the children have friends.

And now as to the character of the professional work, there are two well-defined departments. In the first, normal schools should train philosophic teachers, — teachers with that masterly comprehension of the entire field that will enable them and dispose them to make new and safe paths, and be ever fresh and inventive. This department is by all means of the highest importance, and never to be lost sight of. Yet, taking a practical view of the demand, it is just as evident that for the leader there must be many followers, that the thought and invention of the few may be appropriated and applied by the many who think and labor within a more contracted horizon.

Now *both* departments of this work must be provided for by the normal schools. They must sustain this twofold relation to the profession. They should be allied to the university and radiate their influence from a centre; but no less should they be near the people, and be practical in detailing work for the rank and file. To exclude the first is to hazard all culture and improvement, and to threaten the profession with the mechanical routine of a superficial mediocrity. To neglect the second is to leave the masses uncared for.

Second, but normal schools have a still more important relation to the system, and a responsibility which, I fear, has not been fully appreciated.

At the very time when educational methods took a new departure, when the education of the children was conceded to be the important and difficult problem, the doctrine of popular education was propounded by the philanthropist, and has now become thoroughly established.

But between doctrine and the realization of doctrine in life there is a great interval, as great as between the ideal and the real. It has entered the creed of every political party that the state ought to make provision for the education of all its children. Yet, after these two hundred years of discussion and advancement, four fifths of the children are not included in any well-organized system of continuous instruction by well-qualified teachers, selected upon the generally accepted principles of civil-service reform.

Here, then, is a field for work,—pioneer work, missionary work,—demanding men of enthusiasm to reach down, or, better still, to come down, in their sympathies to the plane of the people, and with patience to show them the advantages of education and the methods of securing it. Now, in this field, the normal school ought to have a place. It ought to be the school of the prophets, the fountain and nursery of the enthusiasm that shall establish the profession and make it a power in perfecting the entire system of education.

Teaching, like the Christian ministry, belongs to the department of philanthropy. While each has a business side, mere considerations of gain, comparing them with other departments of labor, could not induce talent and learning to undertake either. Hence, the men who serve for money, who see no more in the profession than money pays for, and render only the service paid for, are of but little account in times like these.

It is the peculiar province of the normal schools and the highest department of their professional work to inspire teachers with some adequate appreciation of the importance and honor of their service. They do well in supplying the demand for the graded schools, who are doubtless more appreciative; but they lose a great opportunity in withdrawing so far from the common schools of the masses, to whom they are closely allied, and to whom they are so immediately responsible. The penalty will be a loss of professional patronage and material support, and the loss of a great opportunity.

To illustrate with a little history that came under my own observation, and in which it was my fortune to bear a small part.

The State of Minnesota has for about twenty years supported three normal schools. Some years ago, whether justly or unjustly need not be said, the opinion prevailed among the people that these schools were local in their usefulness, and too select for the companionship of the people. The country district which sent its promising young schoolmistress to the normal school for better preparation, declared that she had been educated *away from* them instead of *for* them, that she returned with the feeling that to teach a country school would be humiliating to herself, and at least not an honor to the school that graduated her.

Moreover, the apparent exclusiveness of the teachers of normal schools gave the impression that they were impracticable and visionary. They were as carpet knights, or as brave soldiers who knew not the smell of powder.

So the feeling grew; county superintendents became either indifferent, or they joined the opposition. Legislators reflected the wish of the people, until in an evil day, when the tide of granger influence set in, we were brought to judgment; in a word, our supplies were cut off.

It was to little purpose that we plead our own innocence and the ignorance of the people. The simple fact was that of 180,000 children, the representatives of 140,000 in the ungraded country schools decided that we had not made apparent to them that we were worth supporting. We took the only wise course. We got a new and probationary lease of existence, and began in earnest to define our position and adjust our relations.

The normal schools shared in the institute work, appointing a practical institute teacher for each of their schools. Normal teachers taught in county institutes, became personally acquainted with country teachers, explained and illustrated before their very eyes that normal teaching was natural and common-sense teaching, and included all the good features of old ways and some features both new and sensible. We principals got out of our soft places and, with gripsack in hand, started upon an educational campaign among our constituents. We stumped the State. In brief, we undertook to ally the normal schools in sympathy and work with the people, to study the wants of the rural schools, and to do our full share in removing the obstacles to progress.

The result has been that these schools are now firmly established in the confidence of the people. In material support and in patronage their "cup runneth over." And I will venture to say, if I may do it without immodesty, that the normal schools of no State are better sustained by the county superintendents, or send to the country districts a larger percentage of trained teachers, than the State I have named.

In summary, then, normal schools are an organic part of the modern system of popular education for the perfection of all its departments. They are the coadjutors of the district officer, county superintendent, and State superintendent. They are established as a signal service in every quarter of the educational horizon, to report currents and give warning of dangers. They are the pledged enemy of every educational heresy in government or instruction, the advocate and friend of honest work.

The university professor may have his chair, and from it satisfy a well-established demand ; but the normal-school professor must live in his saddle in the field and on the march.

Finally, the demand laid upon normal schools is that they comprehend the best scholarship, the most advanced thought upon the philosophy of teaching, with not only the history of pedagogics of the past, but its problems of the present in process of solution, aggressive and loyal to the best interests of the people.

FOREIGN.

GREAT BRITAIN. — *England.—Elementary Education.* — The London School Board has attracted more attention than any other in England, partly by reason of the magnitude of its work and partly through its regular system of reports. It is, however, generally conceded that London is behind the great towns of the north of England in the development of its schools. Birmingham, Manchester, Sheffield, Liverpool, and Bradford stand out as leaders of progress. Jan. 15th, Birmingham celebrated the opening of a new Board School. The building contains a central hall and eleven class-rooms, having been constructed in accordance with the idea now boldly maintained in Birmingham, that the class system with adult teachers is the only one which promises satisfaction. The school will accommodate 870 children; viz. 300 boys, 240 girls, and 330 infants. A science lecture-room, with capacity for 68 children is erected upon the same site, but its use is not limited to the pupils of the new school. Mr. Mundella's addresses at Birmingham, one delivered in the morning at the opening of the school, the other in the evening before a public meeting in the Town-hall, have attracted great attention. He indorsed the class-room scheme as economy in the time, strength, energy, and temper of the teachers and in the efforts of the children, though financially a little more expensive than the prevailing system. With reference to the Compulsion Act, he said compulsion was not due to the middle classes or to the magistrates, but to the working classes. Opposition, he affirmed, came from the employer, the magistrate, and the rate-payer, and not from the parent. Mr. Mundella called attention to the fact that the average attendance upon elementary schools had risen from 1,152,000 in 1870, to 3,015,000 in 1882; and that the numbers presented for examination showed an increase of 4.11 per cent. in the lower standards, and of nearly 12 per cent. in the upper standards.

Technical Education.—The annual report of the City and Guilds of London Institute has given rise to much discussion of the ways and means of technical education. The leading authorities in England and upon the Continent seem to be agreed in the opinion that theoretical instruction alone is of little value to workmen. They require to see the theory applied to actual work in material, and to practice that application themselves. A number of able and public-spirited London artisans have formed an association for the twofold purpose of making known to the Royal Commissioners, the City and Guilds Institute, and other public bodies, the views and wants of working-men in regard to this subject, and of promoting the formation of technical classes in the neighborhood of the workmen's homes.

Elementary schools, in which the skill of practical and scientific workmen shall be brought to bear upon the training of the young are strongly advocated. In Manchester the experiment of introducing manual training into the elementary schools is on trial. A very cautious feeler in this direction has been thrown out by the London School Board in the form of a resolution asking the Education Department to authorize the introduction of trade-teaching in certain Board Schools.

IRELAND.—*Elementary Education.*—Under the firm, judicious management of the Board of seven commissioners, the national system of primary education is making sure progress in Ireland. Inspection is conducted as in England and Wales. The inspectors are appointed, upon examination, at an initial salary of £250, rising to £500. The requirements of the Results Code in British Schools are almost identical with those enforced by the Irish Board. The latest statistics place Ireland in a favorable position as regards the three essential subjects, the percentage of passes being as follows: Reading, 92.4; Writing, 94.5; Arithmetic, 76.2. In 1881, the National Schools numbered 7,648, with an enrollment of 1,066,289; the grant reached the sum of £729,868. The per cent. of average attendance is low, as is generally the case in agricultural countries. The problem of industrial training is assuming great importance in Ireland. The members of the Royal Commission have visited Ireland for the purpose of determining in what way instruction in the use of tools and in domestic trades may be introduced among the poor people, especially of the western districts; and a memorial has been addressed to Mr. Gladstone, requesting the appointment of a special commission on Irish industries. The memorial is signed by a large number of Irish members,—Liberals, Conservatives, and Home Rulers alike.

UNIVERSITY ITEMS.—*Cambridge.*—Cavendish College, Cambridge, was founded to enable students younger than ordinary undergraduates to pass through a University course, and to train for their profession students who propose to become schoolmasters. The Senate of the University has recently passed a grace admitting the college to an independent position within the University, under the title of "Cavendish College Public Hostel." The success of the students in gaining honors has contributed greatly to the result, while the distinction won by the college boat, and by its cricket and football teams have not been ignored in summing up its merits. The charges at Cavendish are as low as £84 per annum.

Edinburgh.—The Scottish Universities differ essentially from Oxford and Cambridge. Compared with the latter, they are inexpensive, while a large proportion of their students are only fitted for such work as is done by secondary schools in England. In Scotland there is no university life; men lodge as they please, and obtain tuition only at the University. It is noticeable that new English universities incline to the Scottish type. The medical school of Edinburgh has recently regained its old prestige. The register numbers 1,730 students, of whom only 692 are Scotch. The new university buildings contain the most ample appliances in the shape of museums and laboratories for the study of every branch of natural science bearing upon medicine. The fame of extra academical lecturers attracts many students, and the university pursues the liberal policy of allowing attendance upon them to count in the courses required for graduation.

The Royal University of Ireland.—This university marks an era in the history of education in Ireland. It was chartered in 1880, with power to confer all such degrees as can be conferred by any other university in the United Kingdom, degrees in theology excepted. No residence in any college, nor attendance at lectures in the University, is obligatory, except for medicine and surgery. Thus, the University removes the disabilities from which the Roman Catholic youth of Ireland have suffered. The first act of conferring degrees by the Royal University took place Nov. 8, 1882, in the permanent buildings, Earlsfort terrace. The large assembly included various creeds and denominations, and the ceremonies left a lasting impression of the harmonizing mission of the University. Ladies are admitted to all the privileges of the University, and the names of several appear among the candidates who have attained high honors in Latin and mathematics.

FRANCE.—*Neutrality in the French Schools.*—Education has been a prominent theme in the French Assembly during the present session. In the Senate, a heated discussion upon the question of the religious neutrality of the schools took place, Nov. 18, in which it was claimed that the utterance of certain officials raised the suspicion that neutrality was only a name, under cover of which atheistic doctrines would be inculcated. Mr. Fournier, a senator of the Right, called upon Minister Devaux to define his position on the subject. The response of the minister seemed to give general satisfaction. Among other things he said: "The first duty of the legislature which institutes the schools, of the minister of the government which executes the law, is to assure the neutrality of the schools in a manner the most scrupulous and positive." And again, "The surest means of penetrating every mind with the idea of neutrality is by setting an example of respect for the opinions of all."

The Example of the United States.—Discussion upon the project of law, relative to a general fund for lycées, colleges, and primary schools, took place Dec. 22. The jurisdiction of the State over the communes was considered, members of the Right opposing the doctrine of centralization. "You speak often," said a member, "of the American Republic. You speak of it very often, but never imitate it. Obligatory instruction in America differs entirely from that which you attempt to establish in France. Instruction there is free, in the sense that the States, the cities, have the right to direct it as they desire."

Budget for Primary Education, as passed by the Chamber of Deputies.—For inspection of primary schools, 2,265,297 francs (about $430,000). This article excited lively discussion, the members of the Right insisting that the system of inspection made the schools the instruments of a political party. One speaker exclaimed, amid great excitement, "You have demolished one bastile; you have with the débris constructed 40,000 bastiles." The budget for primary normals was reduced 100,000 francs, by the vote to abolish chaplains, and passed at 2,236,200 francs. For the service of primary instruction,—viz., salaries, school-buildings, superior primaries, and subventions to communes,—to enable them to bear the expenses of making instruction gratuitous, 79,620,200 francs. For primary courses for adults, silver medals for retired teachers, etc., 4,615,116 francs. Reconstruction and enlargement of the Sorbonne, 1,400,000 francs. Instruction of Mussulmen, 94,000 francs. Voyages and scientific expeditions in Algiers, 5,000 francs. Total, 90,235,813 francs (about $17,145,000).

Technical Training.—At the instance of Minister Duvaux, preparatory courses of instruction in manual work in the normal schools, and in the superior primaries, have been prepared by Mr. Salicis of the Polytechnic School. Mr. Salicis is qualified for the service, having organized the manual instruction for the school in the rue Tournefort, and having been subsequently deputed by the Minister to study similar institutions in foreign countries. The first trial of the course is to be made in the place formerly occupied by the school Pape-Carpantier in Paris.

WURTEMBERG.—The Bureau of Education has received an interesting statement of the condition of public instruction in Würtemberg, from which the following is compiled:

The University of Tübingen comprises seven faculties, and numbers forty-nine ordinary professors, seven extraordinary professors, eight auxiliary professors, and thirty-six "Privat Docentem." The total of students in the summer semester of 1880 was 1,223.

Under the head of Schools of Agriculture and Sylviculture are classed the Grand Academy of Agriculture and Forestry at Hohenheim, the Veterinary School at Stuttgart, eight secondary schools, and several kinds of schools belonging to the system of primaries, and numbering in all 808. The courses of these various institutions were attended, in 1880, by 16,722 persons.

The Technical Schools are the Polytechnic School and the School of Builders, both at Stuttgart, and 185 industrial schools, of which twenty-eight are for women. The attendance upon the industrial schools in 1880 was -2,197 pupils, of whom 9,280 were under seventeen years of age..

There are two institutions for instruction in the fine arts; viz., the School of Fine Arts, and the Conservatory of Music, both at Stuttgart.

There are 182 secondary schools for young men, and eleven for young women. Of the latter, six are public, and five private; they were attended in 1880 by 3,305 scholars. There is, in addition to these, a superior normal school for women, intended to prepare teachers for the secondary schools.

The enrollment and attendance of primary schools are not estimated. The number of primary teachers is reported as follows: Protestants, 2,106; Catholics and Jews, 966. Salaries range from 900 to 2,001 marks. The State maintains four Protestant normal schools, and two Catholic for masters, and one Protestant normal school for mistresses. Complaint is made that the preparation of primary teachers is insufficient and their salaries too low. It is asserted that these conditions, combined with ecclesiastical domination, have so degraded the schools as to render them unworthy the title of national.

PRUSSIA.—The statistical bureau of Prussia has just published a work by M. A. Petersilie upon the status of primary schools in Prussia in 1878. In the absence of education reports, this is the latest official information upon the subject. The number of public primary schools, including 110 attached to normal schools, is stated as 33,059, with 60,307 classes. Of the whole number of schools, 23,000 consisted of a single class. The total number of teachers in the primary schools, not including those attached to the normals, was 59,493; to these must be added 27,334 assistants, of whom about 24,000 were special mistresses for needle-work. The total number of children of school-age was 4,272,199.

Of the totals given, 3,915 schools, 20,574 principal teachers, 4,186 assistants, and 1,273,993 children of school-age belong to the cities. A little computation will show that there remain for the rural districts 38,919 principal teachers, and 2,998,206 children of school-age, or 1 teacher to 77 children. The annual expense for primary education, as determined by calculations for the three successive years from 1876–78, inclusive, is for all purposes,—teaching force, school-building, etc.,—101,016,623 marks, or $24,041,956.27. This represents a per capita expense of about 90 cents, estimated upon the populatian as here reported; viz., 26,647,600.

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DEVOTED TO THE SCIENCE, ART, PHILOSOPHY,
AND LITERATURE OF EDUCATION

Thomas W. Bicknell,
CONDUCTOR.

Vol. III.—May–June, 1883.—No. V.

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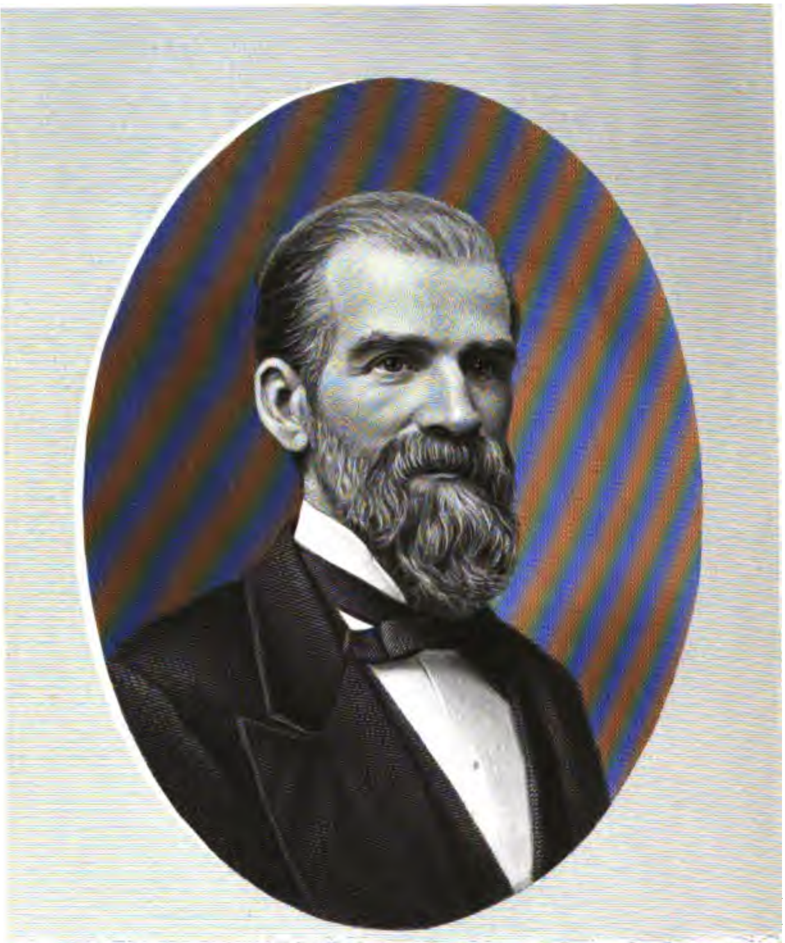

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EDUCATION.

No. V.—May, 1883.

A TRUE ORDER OF STUDIES IN PRIMARY INSTRUCTION, AND THE PROPER TIME FOR EACH.

BY MRS. JOHN H. BAIRD, BURLINGTON, VT.

The natural order of studies in primary instruction must of necessity be the true one, for Nature makes no mistakes. In Nature all is harmony, and when her laws are violated the true end can never be reached.

The birds never make a mistake; there never was a robin whose young were not taught to fly, nor a nightingale whose little ones were not taught to sing. These things are always taught at the proper time and in the proper way. The bees make no mistake: they buzz through the long summer day, finding the sweetest flowers, and making all the honey they can. But they are creatures of instinct, and we are human beings endowed with reason; yet in the world that is governed by reason,—or, rather, where reason is not used rightly—the little human robins are turned into mocking-birds and parrots, the human bees buzz into the wrong hive, and it is only in the human world that there are discords in the harmony. The closer, then, we keep in harmony with Nature, the more perfect will be the result.

"Education has to do with the heart, the head, and the hand." In other words, the moral, mental, and physical nature are each a part of the whole, and true education must include the cultivation of each. In a land whose schools recognize no sect nor creed, where are gathered children of all nationalities and all beliefs,—where all classes and conditions of society meet on equal footing, and where the only religion that can be taught is the religion of conduct and character, it is of the highest importance that no opportunity for moral instruction should be allowed to pass unheeded. Habits of diligence and order should be cultivated every day and every hour, and lessons should be given in kindness, thoughtfulness, courage, and honesty.

So, also, should the physical nature be cared for. The maxim, "A sound mind in a sound body," is as true now as it was when it first came from the lips of the philosopher. Although we consider school-work in general as mental training, yet the physical and moral health can not be separated from the mental, for they are by nature together; and the care of the physical health and of morals is as much a part of the natural order of studies as the training of the mental faculties.

In the different divisions of the public school, which are made according to the age and ability of the pupils, by far the most important is the primary grade. Here the children are, by reason of their age, most susceptible to the influences around them; in this school is found the greatest number of pupils. All do not complete the entire course and graduate from the high school, but all must enter the primary, and many children never go beyond it. It too often happens that, even at that tender age, their earnings are needed to swell the income of the family. Hence it is absolutely necessary that the children of poverty, whose years in school are few, and who are obliged to battle with the world when they are very young, should receive, in the primary school, the best instruction the State can furnish, if, in return, the State is to receive from the school those who will become good citizens. It is even more necessary that children of wealth, whose influence in the world may be greater on account of that wealth, should be taught, at the outset, habits of diligence and order. Therefore, in the time that is allotted to primary work, every effort should be made to fit the average boy and girl morally, mentally, and physically for the requirements of every-day life.

If, then, for the reasons that have been given, the primary school is so important, the position of primary teacher must be a very important one; and so it is, for "As is the teacher so is the school." The best order of work and the best methods are powerless in the hands of a poor teacher, just as the finest marbles and the best chisels, in the hands of an unskilled workman, produce nothing that is art. The architect who plans the house in which we live, and the workmen who carry out his designs, have served their term of apprenticeship. The dressmaker and tailor who make the clothing that we wear are skilled in their separate trade. From the physician who is to heal our bodies we require not only a knowledge of the science of medicine, but a knowledge of the practical application of that science, before we are willing to trust our dear ones in his hands. Alas, that we are not equally exacting in regard to the qualifications of those to whom we trust the mental training of our little ones! For all physical wants we make proper provision; but the training of the human intellect, which is God's greatest gift to man, is frequently given to an untrained teacher. If there is any place where skilled teachers are needed, it is in the primary school; for these little ones are quick to feel the force of sympathy, and this is the beginning of school-work. In this school a love of books and learning, of honor, justice, and morality, of nature and of Nature's God, will take root, and receiving due encouragement it will go on to the highest things which the human mind can conceive; or it may, through lack of proper guidance, become perverted and eventually lost. Therefore a knowledge of the mind that is to be taught,—how to stimulate, how to control, how to encourage, how to restrain, how to guide and direct its movements and impulses, and a knowledge of the science of the work that is to be done, are necessary for her to whom is intrusted the teaching of "His little ones."

For this one profession the State, through its normal schools, furnishes the preparation. In the best of these schools not only the science of teaching is taught, but the principles that are taught are put into practical application in training-schools provided for the purpose, and the work of teaching, as well as that of learning, must be well done before a diploma is given. With such preparation as this, good teachers can be expected. The same preparation may not be necessary for all, but all need some preparation. To this preparation add a love for the work and for children, the originality and personality of a true woman, and we have the true primary teacher, the first necessary element in a true order of studies.

The true order of studies is the natural order. If we wish to find the true order of nature, we must begin where Nature begins. Nature's first lessons are given to the baby in the cradle. Give a baby a new toy, and in a very short time it will have a fair knowledge of the qualities of the plaything, and it will get its knowledge with Nature for a teacher. Let us observe the lesson.

First, the eyes are wide open, and the baby looks the object thoroughly over; then the little hands are reached to take it, and the baby pats it first with one hand and then with the other; in another instant the toy has found its way to the baby's mouth for further investigation. Soon it is pounded, to bring out whatever noise there is about it; perhaps the object will be broken; if so, the probabilities are that the baby will express his surprise and delight at having discovered one thing more; if it is not broken, the object will soon be thrown aside, and the baby has finished his object-lesson. But if a new object is presented, it will be subjected to the same process and with the same degree of interest and satisfaction.

From this observation of a natural lesson we have learned that the baby obtained his knowledge of the object by seeing, touching, tasting, and hearing, by the exercise of the faculty called perception,—that faculty of the mind first exercised in getting knowledge in the natural way, and therefore in the true way; also, that when the child grew tired of one object he could be interested in a different one, thus showing that nature needs variety.

At a very early age we notice that a baby remembers; for its mother is missed when absent, and greeted by a smile on her return. This shows that memory is the next faculty exercised in Nature's order of mental work.

Soon another faculty presents itself. Whatever has frightened the little one once will be sure to frighten it again. It seems to say to itself, "The other dog hurt me; therefore this one will." This faculty of reason is exercised in very young children. The germ of every faculty of the human mind is perfect in the baby; but in the baby's mind all faculties are not exercised equally. Reason, which is developed to its full extent late in life, occupies a smaller place than the others in the earlier mental work of a child's life. It is, therefore, evident that if we would train the mind after Nature's model, the subjects which are taught must always cultivate perception and memory and language, and must appeal to reason in every case, when the little mind can be led in a natural and logical way to a correct conclusion.

Generally speaking, a child does not enter school until he is five years old. In that five years he has gained a vast amount of knowledge. No lesson was hard or disagreeable, because the mother, whose love was boundless, was the teacher and Nature ruled the order. The child was eager to learn. If he saw anything new, he wanted immediately to know all about it, and went to mamma with the questions, which were answered, one by one. He learned as much as he was able to comprehend about that object, but soon something else presented itself, and new questions were asked and answered as before.

This little one began arithmetic when he could say, "Two hands"; he commenced geography when he said, "Here" and "There"; geometry, when he first knew anything of lines; moral science, as soon as he knew the meaning of "naughty" and "good"; in grammar this little child has mastered almost completely his mother-tongue, the art of language, and all without learning rules.

Since Nature has commenced so many subjects and she is to be our guide, we surely cannot do wrong if we attempt to carry on the work that she has already begun; but if we take her order of work we must take her method of work also, and remember that a child's mind must be formed before it is furnished, and that while science builds *down* from *above*, Nature builds *up* from *below*.

There seems to be a prevailing idea that the waves of reform which have undermined the old methods have as yet produced no satisfactory results in the new methods; complaint is made that subjects have been multiplied until that which is useful and necessary in knowledge has been replaced by that which is ornamental, and that the children of the present day, under the present method of instruction, are not taught to read, write, and cipher as well as the children were years ago. If such is the case, then there is great fault somewhere.

That method is the best which produces the best results. To teach a child to *see*, to *think* and to express his thoughts, is to send him into the world a vital and intellectual force. Whatever method will accomplish this is a good one.

A person is not educated who knows books only; in the natural order a knowledge of *things* precedes a knowledge of *words*. To quicken the perceptive faculties, arouse the intellect, develop the moral nature, and cultivate language, there is nothing in the whole curriculum of study as beneficial as a systematic course of object-lessons, or miscellaneous lessons, if the latter term is a more comprehensive one. It is comparatively easy to make a child's mind a receptacle of facts, but it is quite another thing to develop close and accurate powers of observation and expression; to teach a child to *see*, to THINK, and to TALK. All teachers know the difficulty of getting young children to talk well in school, and indeed many children of a larger growth are careless and indistinct speakers. The *art* of language is an important branch of education. It is the only means a teacher has of finding out how thoroughly a child has mastered a subject. This cultivation of language can be obtained most readily from object-lessons, because in them the child has some familiar subject to talk about, and they are a help toward removing any restraint the child may feel on account of being away from home and among strangers. A variety of subjects can be introduced and new interest constantly aroused. Conception and reason are cultivated through perception, and this is the natural order of the development of the faculties. Through these lessons instruction may be given in school in the same manner that it was given at home,—that is, from objects; and learning *in* school may be made as pleasant as learning *out* of school. These lessons are also a help in the study of Nature.

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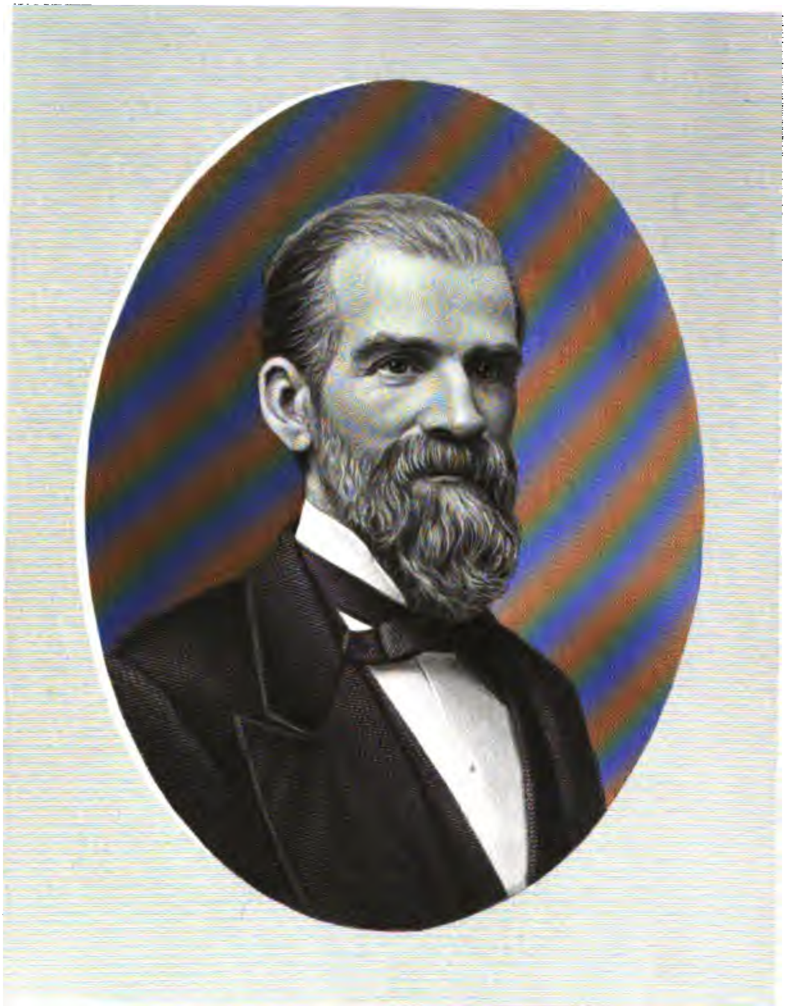

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OBJECT - LESSONS.

Object-lessons are another means of leading children to observe closely and to communicate the results of their observation. The plan of these lessons is similar to that followed in the animal lessons. The object is considered as a whole, then in regard to its parts and their position and use. Next the qualities of the object are considered; then the uses, and the qualities on which those uses depend. Finally, the object is considered in regard to growth, cultivation, or manufacture. It is to be remembered that the object of these lessons is not to cram ideas into the minds of children, but to develop those ideas in the mind. In this work the following matter is sufficient for a lesson to be given during the first year of school:

A Hat.—Parts: A hat has a crown, brim, binding, lining, and band.

Or, some lessons on simple qualities may be given, as,—

An Apple.—This apple is red. This apple is round. This apple is sour.

The second-year ideas of important qualities should be developed, and the term for those qualities given. Several objects should be used in developing the idea before the term is given: as in a lesson in which the idea of the word "brittle" is to be developed, experiment should be made with crayon, glass, slate-pencil, etc., before the term is given. The children should state, of each object, that "it will break easily." The term "brittle" should then be given and applied. The matter of the lesson should be written upon the board, and the class should be drilled upon the spelling of the words; the lesson should then be reproduced from memory. A list of objects which possess a certain quality may constitute the matter for a spelling-lesson.

During the third year the faculties of the mind are still further exercised in the lessons. Matter similar to the following should be obtained from the children in any one lesson. (In this year all reproduction should be from memory.)

Milk.
- I. Qualities.
  - (1) Milk is a natural animal substance.
  - (2) It is white, opaque, liquid, wholesome, nutritious, and palatable.
- II. Uses.
  - Milk is used for food because it is wholesome, nutritious, and palatable. It is used in cooking because it is liquid, sweet (or sour), and wholesome. Milk is manufactured into butter and cheese.

The process of making butter and cheese may also be considered.

Lessons on the comparison of the qualities of different objects are an excellent drill in this work. The children should be led to select and name the qualities which two objects possess in common, and also the qualities which are not common to both. For this purpose subjects similar to the following should be selected: Vinegar and Water; Salt and Sugar; Coal and Iron, etc. Lessons on foreign substances, their growth and cultivation, or manufacture, are pleasant and instructive. Lessons on the growth and cultivation of tea, coffee, cotton, sugar, camphor, etc., are well adapted to pupils of this grade. The children should first be led to tell all they know about the subject, and then some new information should be given them. Similar lessons on the manufacture of common articles, such as glass, starch, woolens, cottons, etc., are equally beneficial and instructive.

Enough has already been said to indicate the plan of work and the method that is to be followed in these miscellaneous lessons. Each year has its regular amount of work in each of these subjects just as exactly as it has in reading or arithmetic. The method for the remaining subjects is similar to that pursued in the subjects already considered. In any of this work there is no violation of Nature's laws, for nothing is given that a child can not readily comprehend, and no subject is taken up which Nature has not already begun.

Color.—The color lessons which are given in the first year should include the names of colors, and the proper application of those names to the colors in different objects, such as blocks, cards, ribbons, flowers, fruits, and any object either within or outside of the school-room. Ideas of harmony of color should be developed by leading the children to place colors side by side that look well together. In connection with these lessons in color, work in drawing may be introduced, and the children taught to draw leaves, and even flowers, from nature, using colored crayon for the work. This work is both pleasant and useful.

The second year the work in color should be confined to the consideration of standard colors, tints, shades, and hues of color.

The third year the primary colors should be named, and children should be told why they are called primary colors. Secondary and tertiary colors should be formed from the primary ones by actuul experiment. The teacher should *direct* the work of mixing the colors, but the children should do the work. Harmony of color should be defined, and exercises in arranging colors with a view to harmony should be given. In this way these lessons are a cultivation of perceptions, reason, and taste.

Form.—The child began the study of geometry as soon as it knew what a straight line was. The lessons in *form* are at first confined almost entirely to objects; considering surfaces, faces, edges, and corners as a preparation for the study of lines, angles, and figures. Ideas of straight and curved lines should be developed, and the different directions of the straight line should be taught. This knowledge should then be applied in drawing.

The second year the work in form should include definitions of the different kinds of angles and of plane figures,—such as triangle, square, oblong, rhomb, rhomboid, parallelogram, trapezoid, trapezium, pentagon, hexagon, heptagon, octagon, polygon, circle, etc. This work should be applied to drawing, and ideas of halves, quarters, and thirds of lines may be developed.

The third year, work in form should be confined to a simple but perfect description of the more common solids, such as cube, prism, cylinder, cone, pyramid, sphere, and hemi-sphere.

Size.—All lessons in size should be given during the first and second years. These lessons should include the proper use of such terms as express *size*,—as large, small, narrow, wide, etc.

The second year this work should include the more common and simple denominate tables relating to size,—as linear measure, dry measure, etc. Ideas of halves, quarters, etc.

Weight.—The plan of the lessons on weight is similar to that of lessons on size. The work of the first year includes the use of words expressing weight,—as light, heavy, lighter, heavier, etc.

The second year the terms pound, half-pound, and quarter of a pound, should be given and applied, and the table of avoirdupoise weight should be taught.

PLANTS.

During the first and second years *plants* are taken in connection only with object and color lessons, but in the third year this subject should be introduced for regular lessons. Specimens are necessary for these lessons. In this subject all the faculties of the mind are exercised, and also the moral nature. The child is taught to observe nature in the vegetable world and really begins the subject of Botany.

In the object-lessons which precede the lessons on plants, the children have been led to observe the natural divisions of substances, animal, vegetable, or mineral, so that they can say at once that a plant belongs to the vegetable world. The parts of a plant should next be named as *stem* and *root*. Several lessons should then be given on roots, stating the uses of the root and naming and describing the different kinds of roots. When the work on roots has been completed, similar lessons should be given on stems; these should be followed by lessons on leaves, flowers, and fruit. All descriptions in regard to plants should be simple but correct. No technical terms should be given, Some lessons may be given on different kinds of wood, vegetable juices, gums, etc. In all of these lessons a true teacher will find ample room for moral lessons which are not cold, dry, and stereotyped, but such as are the natural outgrowth of the lesson, and will interest and improve those who listen to them.

PLACE.

Last of all, in this course of miscellaneous lessons, we consider the subject of Place, which is the beginning of work in geography. This, like all other subjects in a primary school, should be taught objecttively. As was stated before, a child began the study of geography when he said "here" and "there." The first of these lessons which are given in school should be lessons in which words which indicate place and position must be used; for example,—here, there, under, over, above, below, right-hand-side, etc. Children should then be led to discover and state the *relative position of objects*, after which cardinal and semi-cardinal points should be taught in order to have them consider *places* in the same point of view.

The second year the natural features in the vicinity should be considered, and the geography of the city or town should be taught, using a map when it becomes necessary to do so.

The third year a few conversational lessons should be given on the earth as a whole; these lessons should be followed by the preliminary definitions which are necessary to the intelligent study of geography. In these lessons the consideration of the land-surface of the earth is the natural beginning; high and low lands should be defined and classified; then the inland waters. This part of the work can, and should, be taught objectively.

The fourth year maps and globes must be used; books should be introduced and used judiciously. But children at this age should not be assigned a lesson to learn in which every point has not been previously developed.

The work of the fourth year should include definitions of globe, map, equator, horizon, poles, etc. Also, the different coast-lands and waters, definitions and location of the continents and oceans, and definitions of climate, vegetation, and occupation. For children of this country the geography of the United States should occupy the remainder of the year. Particular study on this country is preferable to the general study of the continents; for when a child has been in school four years, it is time he knew something of his own country.

The following schedule of Miscellaneous Lessons for the first three years in a primary school indicates the amount of work that should be accomplished:

ORDER OF MISCELLANEOUS LESSONS.

FIRST YEAR,—PRIMARY.

FIRST FORTNIGHT.—Conversation lessons on *pictures*.

SECOND " —*Human body*. Conversation lessons. Parts of the body, parts of the limbs, joints.

THIRD " —*Animals*. Conversation lessons. Parts of a cow, cat, dog, horse, sheep, rabbit, goat.

FOURTH " —*Color*. Lessons on naming and distinguishing red, yellow, blue, orange, gray, green, and brown.

FIFTH " —*Place*. Ideas of relative position developed and terms applied; as, under, over, above, below, between, beside, right-hand side, left hand side, upper side, lower side.

SIXTH " —*Human Body*. *Review*. Parts of the head, parts of the face. The eye, and the sense of sight. The ear, and the sense of hearing. The mouth, and the sense of taste. (Moral lessons.)

SEVENTH " —*Animals*. *Parts*, considered in regard to their number and use. A hen, duck, goose, canary, peacock, butterfly.

EIGHTH " —*Color*. *Review*. Purple, scarlet, pink, violet, black, white, lemon, russet.

NINTH " —*Place*. Cardinal and semi-cardinal points.

TENTH " —*Form*. Surfaces, faces, edges, corners, straight and curved lines.

ELEVENTH " *Size*. Application of the terms large and small, wide and narrow, deep and shallow, deep and high.

TWELFTH " —*Human body*. *Review*. Parts of hand and foot. Uses of each. Comparison.

THIRTEENTH " —*Place*. *Review*. Location of children's homes, public buildings, etc., in regard to their direction from the school-building.

FOURTEENTH " —*Objects*. Parts and names of parts of a book, bell, knife, hat, coat, umbrella, apron.

FIFTEENTH " —*Form*. Direction of the straight line. Drawing.

SIXTEENTH " —*Size*. Larger, largest, smaller, smallest, narrower, narrowest, wider, widest, taller, tallest.

SEVENT'NTH " — *Weight*. Lighter, lightest, heavier, heaviest.

EIGHTEENTH " —*Drawing*.

NINETEENTH AND TWENTIETH FORTNIGHTS.—*Review all*, and Drawing.

SECOND YEAR,—PRIMARY.

FIRST MONTH. —*Form*. *Review*. Angles, triangles, square, oblong, rhomb, rhomboid. Drawing.

SECOND " —*Color*. Standard colors, tints, hues, and shades. Drawing.

THIRD " —*Size and Weight.* Ideas of halves, quarters, and thirds. Distances compared. Linear-measure, dry measure, liquid measure, avoirdupoise weight.

FOURTH " —*Place.* Natural features. Map of vicinity.

FIFTH " —*Form. Review.* Parallelograms, pentagon, hexagon, heptagon, octagon, circle, circumference, diameter, radius, radii, arc. Drawing.

SIXTH " —*Objects. Qualities.* Odorous, inodorous, fragrant, tough, brittle, flexible, inflammable, porous, absorbent, elastic, liquid, natural, animal, vegetable, mineral.

SEVENTH " —*Animals.* Description of parts and habits of the cud-chewers. The cat family. The weasel family. Thick skinned animals.

EIGHTH " —*Drawing.*

NINTH " —*Review.*

THIRD YEAR,—PRIMARY.

FIRST MONTH. —*Form. Solids.* Cube, prism, cylinder, cone, pyramid, sphere, hemisphere. Drawing.

SECOND " —*Place.* High and low lands, mountains, mountain range, mountain system, mountain peak, volcano, table land, hill, valley, plain.

THIRD " —*Animals, birds.* Swimmers, Scratchers, runners.

FOURTH " —*Objects.* Qualities and uses of cork, sponge, water, milk, glass, etc.

FIFTH " —*Place. Review.* Inland waters. River, mouth, source, banks, etc. Lake, head, foot shore, etc.

SIXTH " —*Animals.* Perching birds, waders, birds of prey.

SEVENTH " —*Form.* Drawing.

EIGHTH " —*Objects.* Growth and cultivation of tea, coffee, sugar, etc.

NINTH " —*Plants.*

TENTH " —*Review all.*

[To be continued.]

MACBETH AND LADY MACBETH.—A STUDY.

BY ALICE E. CARTER, FRANKLIN, MASS.

A child may gaze in wide-eyed wonder at the sea. Its deep blue, its madly-leaping waves, its long, white ripples on the sand may delight him. If a lavish tide lay at his feet tinted shells and rounded pebbles,—if only one of either,—that is his portion; but to affirm what elements compose the mass, to sound its depths, and tell of its resources, and explain its mysteries of motion, are for the scientist. So the simple student may read with wondering enjoyment this great tragedy, *Macbeth*, but it is not for his own wisdom to determine its natal day, nor to decide how much of it is from Shakespeare's own hand, and how much from contemporary assistants or later revisers. Neither is it for him to criticise wisely the plot and action, nor to dilate upon its words and phrases. His portion is that which his mind can as easily grasp and hold, as the tiny palm of the child can clasp the shell. The *characters* of the play, then, are the student's rich portion. Schlegel has said, "Earnestness is the essence of tragic representation." He also says, "Earnestness is the direction of our mental powers to some aim." Because of her earnestness, Lady Macbeth is the most tragic character of this play.

There seem to be as many Lady Macbeths as there are critics upon this tragedy, since each one has, in words, painted her unlike any other one's representation, and no one wholly like the original,—Shakespeare's portrait of her. Would it be possible for a student who had never read the play to conceive what she must have been, were he to read all the critics? The Germans would exalt her into a character of rare virtue; the French would pronounce her a depraved woman. One represents her as the tempted, the other as the tempter, in the crime which darkens this tragedy. Not long since one woman exclaimed, "Lady Macbeth! what a villainous character!" Yet no woman-critic has yet condemned her as wholly unworthy. Some one has recently proved by logic that the much-slandered Xantippe was an amiable and docile spouse. Surely, only by some syllogism could Lady Macbeth be proved less than an accessory to a terrible crime. It is not attempted to prove her an innocent woman, but to urge all who analyze her character to gaze as long at the good in it as at the evil.

Involuntarily the wish comes that the poet had told us the exact ages of this ambitious pair, Macbeth and Lady Macbeth, and had given us some hint of their personal appearance. Would it not help us to better understand them? Freisen, a German author, argues very reasonably that they were "not at all advanced in age." Mrs. Jameson pictures Lady Macbeth as an exception, in personal appearance, to the Celtic race. Mrs. Siddons imagines her a delicate blonde beauty. Bucknill pleases to call her "a tawny, blonde Rachael, with gray eyes," and adds, "*Probably she was small, for it is the smaller sort of women whose emotional fire is most fierce.*" Campbell, however, called her "a sister of Milton's Lucifer, externally majestic and beautiful." All this proves that each one may have his own ideal.

Before my eyes Macbeth and Lady Macbeth stand pictured thus forever: He, a stalwart Scotch soldier, of noble physique, just in early manhood she, in early womanhood, wondrously beautiful externally, of that type of beauty which inspires passionate love in a man like Macbeth; viz., a petite, lithe figure, whose every attitude and motion display a nameless grace; her Celtic ancestry gives her fair hair; her face possesses that cold, white beauty which repels while it attracts. Her eyes are dark blue, fascinating, treacherous, cruel,—before their gaze one quails. Macbeth loves her ardently. Her's is a cold nature, kindled into its only possible warmth by the power of his love toward her. All the affection of which she is capable she gives to him, and in it she is constant. His fierce love burns out to the ashes of selfishness. In the heart of each lies innate ambition, the dominant passion in each. It is a fateful bond of sympathy. Circumstances over which, as free and responsible beings, they have a certain control, press upon them. Instead of resisting their temptation they yield, and terrible events follow.

The circumstances are: for Macbeth a prophetic salutation by the "wierd sisters," immediate office, and the honor of the king's visit. The events that follow: murder, sovereignty, remorse, and retribution for each; insanity and self-destruction (probably) for her; defeat and death for him.

Says Lamartine, "Such is Macbeth! It is crime! It is remorse! It is the weakness of a strong man opposed to the seductions of a perverted and passionate woman." Rather, would we say, it is the weakness of a cowardly and selfish man whose insatiable ambition alone is his ruin and hers. The guilt of conceiving the idea of the murder is not hers, and the guilt of the deed, Macbeth's alone. We have the play itself for authority in this assertion. Murder has been in his thought long before his meeting with the witches; there is nothing in their words to suggest a crime, but rather to withhold from it. "All hail, Macbeth! that shalt be king hereafter," they say. Guiltily he starts; then becomes oblivious of all surroundings. He broods over the prophecy.

"If Chance will have me king, why Chance may crown me,
Without my stir,"

he exclaimed one hour; but in another,—

"Stars, hide your fires,
Let not light see my black and deep desires."

Then he writes to his wife,—and in this fragment of a letter the poet gives us the key that unlocks the secret purpose of Macbeth's heart:

"This have I thought good to deliver to thee, my dearest partner of greatness, that thou mightest not lose the dues of rejoicing by being ignorant of what greatness is promised thee."

To me the sound is, "What greatness *I* promise thee." Previous to this letter he has surely in some way revealed to her the blackness of his heart, for later, in anger at his fickleness, she exclaims:

"What beast was it, then,
That made you break this enterprise to me?
When you durst do it, then you were a man."

These are very significant words. Do they not point to some preceding plan of his, which the poet, with true art, does not otherwise make manifest? The origin of the crime is in the heart of Macbeth, and, yet, had there been no Lady Macbeth he would, though he dallied with the knife, have used it at last. We know the impression of this letter on Lady Macbeth:

"Glamis thou art! and Cawdor! and shalt
be king hereafter."

she exclaims, and from this moment dates her share in the crime. Wretched captives to ambition, bound by the same chain, one cannot go forward nor backward now without dragging the other! It is not that she is more desirous of the throne than is Macbeth; not that she is inured to wickedness; not because of her great love for her husband; but because of the oneness of their ambition, and her greater earnestness, that she instantly prepares for action. Macbeth, her lord, has already pointed out the path to power,—it will lead over the body of their king, but that matters not. A strange thing happens. From this moment the fate of Duncan is in *her* hands. It is she who leads, and Macbeth who follows as a creeping shadow. Behold how markedly self-reliant she is!

> "Hie thee hither! that I may pour *my* spirits in thine ear,
> And chastise with the valor of *my* tongue."
>
> * * * * * * * *
>
> "The raven himself is hoarse
> That croaks the fatal entrance of
> Duncan under *my* battlements."

And again:

> "You shall put
> This night's great business into *my* despatch,"

and:

> "Leave all the rest to *me*."

She towers above him in superiority of intellect. This is one reason of her influence over him. Knowing his consuming desire, her firm mind having once determined to attain the crown with her husband, her spirit of resolution makes her dare anything. With her perseverance, there is no thought of retracing her steps. "If we fail?" asks Macbeth, once, trembling. "We fail!" comes promptly, with superb scorn.

There is nothing to hold her back from crime. She lacks in her nature any touch of piety; she is utterly devoid of superstition; for her there is only a conflict between her ambition and her womanliness. What else is shown in her fierce soliloquy? When she has once steeled herself, there remains only the task of continually bringing back to his purpose her fickle husband.

On the other hand, let us glance at Macbeth. His seems the finer nature, and hence is more susceptible to temptations of any kind. It is like an Æolian harp,—responsive to the lightest breath of fair or foul influence. It is almost impossible to define his traits of character. They are like kaleideoscopic bits: in different poises the grouping differs. In battle he is brave, but before an hallucination of his own brain, despicably weak. Now he is loving and tender; again, cold hearted and selfish, He is imbued with darkest superstition, possesses a "fatally facile imagination," and a surface-show of religious feeling. So he vacillates, and, as it were, plays with the dagger that he fears to use. There is no conscience in his dalliance, but only the miserable dread of possible consequences to himself when the deed is done. Each word betrays this.

If we look closely into all the actions of the two, we shall be led to believe in their youth. Duncan comes to the castle of Macbeth. With indiscretion in word and action, the treacherous hosts hurry to the execution of their fell purpose. *He* gives Banquo cause to suspect him; *she* almost betrays her purpose to the messenger Their hospitality to the king is overdone. Macbeth leaves the supper-room, causing inquiry to be made for him; together they agree upon *the signal of a bell* for the moment to commit the crime at which we shudder; he kills the chamberlains; *she* faints in the hour of discovery. All this seems to prove their inexperience in crime.

Through all these terrible scenes, whose horror the poet has deepened by so much of the supernatural, Macbeth leans upon his wife, is inspired with courage by her taunts, unconsciously learns from her dissimilation and self-control,—of which he makes use later,—and, in terror after the deed, is soothed by her calm.

But behold his selfishness! On the morrow succeeding this night of horror comes the discovery. The physical strength of the man is not affected by the severe mental strain. It is otherwise with the woman. From the moment of unnatural excitement when she invoked the aid of the "spirits that tend on mortal thoughts" until that of discovery, there has been no respite for her. The cord, too long and too tensely strained, snaps,—the bow is useless.

"Look to the lady!" cries Macbeth. Is he too cowardly or too selfish to support her now? Were it possible to believe Lady Macbeth an Amazon in stature and strength, endowed with a mind gross enough to accord with such a body, then her fainting could not be real,—must be feigned. Then to believe in her subsequent insanity, which assumes such a delicate nervous organization as would ill compare with a mass of bones and flesh, one must believe her womanish swoon genuine.

Very soon we find the remorseless Macbeth plotting for the "taking off" of Banquo. Ah! surely it was not the sin, but the odium of the deed that had daunted him. A thrall to ambition, cruelty is his only service now! This second crime is easier; he needs not a *woman* to help him, but can use a woman's arguments to hired murderers! Is it wholly policy, or only cowardice, that prevents him from taking with his own hand Banquo's life?

But Lady Macbeth, — we hear one sigh in secret from her: "Naught's had; all's spent." Is not this incipient remorse? Macbeth breaks in upon her discontent, and in a flash her tone is changed to light bantering of her husband. Call it affection, or pride, or a subtle fear of him,—whichever emotion it may be,— is she not at this moment a *womanly* woman?

We have but two other glimpses of Lady Macbeth. First, the banquet-scene, when, for the moment, forgetting what crime has placed "the golden round" on her brow, we bow before her whom majesty clothed so regally.

Not so Macbeth; he is a poor courtier, and can make but sorry semblance of kingly dignity. Suddenly elated by news of Banquo's assassination, and as suddenly depressed by the word, "Fleance is 'scaped," he is absent-minded, and forgets to give the cheer to the feast, and is thrown into a paroxysm of terror by an hallucination of his own over-wrought brain; that is, by the seeming apparition of Banquo at the feast. This is the beginning of retribution for him. Since conscience is nearly dead, he may be tortured through his imagination.

Lady Macbeth is no accomplice in Banquo's murder. She is wholly unimaginative; hence the ghost of Banquo is not for her vision. Not one of the assembled lords beholds it. Macbeth's piteous surprise at their equanimity,—

"You can behold such sights,
And keep the natural ruby of your cheeks!"

and their honest query, "What sights, my lord?" are proofs of this. If only Macbeth beholds it, and since it neither speaks nor acts, but simply comes and gazes upon him, freezing his blood and blanching his cheeks, it cannot be a spiritual manifestation, like the ghost in Hamlet.

Mrs. Siddons believed that Lady Macbeth saw the apparition. Others have believed that to her vision there was nothing save an empty chair, the vacant seat of Banquo. Yet had there been in reality a spirit, with her marvelous power of self-control and her diplomacy, it would have been possible for her to gaze undaunted upon it. She would have retained her composure,—would have made the self-same exclamations of scorn: "Proper stuff!" "What, quite unmanned in folly!" "Fie, for shame!"

Her silence after the banquet comes strangely, but with surprising beauty, after her fine sarcasm in presence of the guests. A woman less great would have chided Macbeth in anger, or have become sullenly silent. Is her silence any proof of her great love for her husband? May it not result either from the impossibility for such a woman to act otherwise, or else from her own utter weariness and despair?

In the latter portion of the drama Macbeth, the ruthless tyrant, is continually before us; but we lose sight of Lady Macbeth for a time. When next she appears it is as the haggard somnambulist, a piteous wreck of the once proud, strong woman. Gervinus calls her "the remorseless Lady Macbeth." Could there be any more terrible remorse than that which gnawed at the heart, crazed the brain, and destroyed the physical strength? Sovereignty proves but doubtful joy for her or for him. She beholds the gradual crumbling away of their throne; he who should be her prop, selfishly leaves her. Alone, with no *confidante*, in marble silence she suffers; insanity results; and now, in "slumbry agitation," she is doomed to re-live each detail of her own crime; and even to bear the burden of her husband's crimes, for he has, to ease his own mind, poured into hers the story of his own dark deeds. With anguish indescribable she rubs her little hand of its one spot, then sighs in a heart-breaking way.

It is hard to say little, wiser to say nothing, of the incomparable pathos of this sleep-walking scene. Truly, "More needs she the divine than a physician." It once seemed to me an incongruity to believe that Lady Macbeth died by "self and violent hands"; now it seems only natural; it only emphasizes her remorse,— it is fitting retribution for her.

"The queen, my lord, is dead," is the word at last brought to Macbeth. Tyranny and ruthless cruelty have smothered all that is noble in his soul. Coldly he hears and replies; but after one moment's reverie, returns to further preparations for the siege. We hear from his lips,—

> "I have lived long enough: my way of life
> Is fallen into the sere and yellow leaf."
> . . . "I 'gin to be a-weary of the sun."

Yet at the last he clings to life and fights for it with mere animal instinct. His retribution is just and fitting.

DOES THE COMMON SCHOOL EDUCATE CHILDREN ABOVE THE STATION THEY ARE EXPECTED TO OCCUPY IN LIFE?

BY WM. T. HARRIS, LL.D.

Do the public schools educate children beyond the position which they must occupy in life?

Why educate the child out of his sphere? Why teach him to aspire beyond the position which the vast majority must always occupy?

These are the questions which are often asked in the days of reaction, when every established institution is saluted with the challenge, "*cui bono?*" and not allowed to pass on until it has given the countersign, "*pro bono publico.*"

Why should we educate children in common schools, at the public expense, at all? Why should we provide opportunity for any and all children to acquire a thorough education?

We are to find the answer to this question by investigating the special conditions of society in modern civilization, and by studying the requirements of the political government under which we live. We are accustomed to accept without dissent the proposition that in a government founded on the ballot-box, universal education is the only safeguard. It is not so obvious to the questioner, however, that the social conditions of modern civilization demand the school-education of all the people. Let us, therefore, consider first this necessity of the nineteenth century before we review the requirements special to our own nation.

It is agreed that this age is one of productive industry. Its active principle is invention; especially mechanic invention. Every day we hear of some new discovery that harnesses a force of nature and compels it to work for man and assist in providing means of food, clothing, and shelter, or means of intercommunication and the spread of knowledge. Mind,—not the body,—is the inventive power; the directive power that can manage and use machines to advantage is mental, and not physical, skill. The growth of invention is so rapid that the increase of manufacturing power by the aid of machinery is said to double, for all the world, once in seven years. The multiplication of steam-engines, and the improvement of machinery, renders this possible. What unintelligent hand-labor is there that has any certainty of being in demand ten years hence? More than this, what trade is there that can count on using, ten years hence, just the kind of technical skill that it requires now?

The history of the present era of industries shows a continual shifting of vocations,—no vocation having any long lease of life. The new discovery will make the trade learned to-day, after a long and tedious apprenticeship, useless to-morrow. Any peculiar knack which depends on manual dexterity may be rendered valueless by a new application of machinery. The practical education, therefore, is not an education of the hand to skill, but of the brain to directive intelligence. The educated man can learn to direct a new machine in three weeks, while it requires three years to learn a new manual labor. The hand, trained for twenty years at one kind of labor, cannot learn a new work requiring different skill, because the muscles have become set and stiffened into one form of action. An uneducated workman will be thrown aside to perish in an almshouse. Only the versatile intelligence is able to meet the demands of the age of productive industry. We are sometimes told by political economists that the fault lies in the unwisdom of the governing power. Inventions should not be permitted. The Chinese government, we are assured, is paternally watchful in this matter of protecting the laborer in his vocation. No mischievous inventions are allowed to supersede the good old ways of production. But then man can make no progress in the conquest of nature without mechanic invention. All but one in a thousand will be doomed to toil like slaves for a scanty pittance of food, clothing, and shelter if no aid is to be invoked from machinery.

The evil arising from the change of vocations rendered necessary by new inventions can be relieved by two measures. First, the facilities of immigration into uninhabited border-lands offer to all peoples pressed for room in the old homes, and to all poorly-paid laborers, the opportunity to remove to localities where they may till the rich soil or set up their mechanical industries for the benefit of a new population in need of their wares. Hope and courage are stimulated in the new immigrant by the spectacle of the results of his labors which convert a wilderness into a civilized country in a short time. The second measure to remove the evil of change of vocation is to educate all laborers, and thereby make them versatile and able to pass from one kind of labor to another without tedious training and waste of power.

But we are told that all this education makes the common laborer aspire to become a professional man. He ought to be contented with the lot in which he is placed by the accident of birth. The more educated intelligence, the more invention. The more conquest over nature by invention, the more aspiration in the mind of the individual. To be a drudge ought not to satisfy any human being. Perpetual growth in knowledge and wisdom, in the realization of reason and the image of the God-like, is the vocation of man. To be discontented with the real is, therefore, the lesson of civilization.

"Education makes people indolent and unwilling to get their living by honest labor," we are told. It is likely that the man who has learned the magic power of science and art to subdue nature will not willingly offer himself a sacrifice to bodily wants, and accept a vocation that requires mere manual labor. He will desire a position that employs his intelligence as well as his hands; for he wishes even his labor to recognize him as something above a beast, and as possessing reason and knowledge. But all this talk about indolence as a consequence of knowledge is without a basis of fact.

The race to which we as a people belong is not an indolent race. Look at its history and study the magnitude and quality of its achievements. Why has it done all this? What would it have done if it had not had ambition, and aspiration, and much heart-hunger? Have not the Anglo-Saxon and Norman races been the most discontented of races on the planet? What contented race is there that has accomplished anything for which mankind are the better? Our civilization rewards the workman who is looking beyond the machine he is using to a better one that he has conceived in his mind. Arkwright, Whitney, Fulton, Stevenson, Morse, and Bessemer are held in high honor as heroes in the conquest over nature.

It is clear that all the bodily wants of man,—food, clothing, and shelter,—depending as they do upon the ownership of property for their satisfaction, are through this means elevated and spiritualized by the institution of society. For property is not the creation of the individual; mere possession does not suffice; it is the recognition of society that makes things become property. Civil society establishes rights of property and division of labor. Through this each man labors for his fellowmen, and depends upon their labor to supply him the articles of food, clothing, and shelter which his own labor does not produce. His bodily wants are no longer mere immediate impulses, as animal wants, but they are converted into the instruments of realizing man's spiritual or reflected being; he is forced by hunger and cold to combine with his fellowmen and to form a community in which he is to respect their recognition far more than his animal impulses and desires. Thus, too, the institution of the family lifts man above mere sexual passion, and makes him in that respect a reflected being, a rational being. Civil society is organized for the realization of man's existence as a property-owner, so that he shall be a universal or rational essence, and not a mere individual animal, dependent on his mere locality and the season of the year and his unaided might for his physical life. Through civil society each individual commands, by his own feeble efforts, the resources of the entire globe. The organization of civil society is so perfect that every day's labor of the wheat-grower affects the price of wheat all over the world. Every day's labor in the mills of Lowell or Lawrence affects the price of cotton cloth in Australia. The day-laborer in the streets of this city commands with his meagre wages to that extent a share in the coffee of the distant Indies, the sugar of Louisiana, the tea of China, the drugs of South America, the fruits and grains, the manufactures from all sections of the country.

The fact that conscious intelligence,— directive power,— controls the property of the world, is too obvious to need re-statement. I call property a "reflected being," because it exists only through the recognition of society. Things exist, it is true, without such recognition; but things do not become property until society confirms the right of ownership. Such recognition is always an act of directive intelligence. The rights of property can be conserved only through an educated class. The higher kinds of property, such as vested rights and franchises, imply a high intelligence in the community. Again, the possibility of possession of property by all in this country adds new validity to it here, and makes it more valuable. That you can alienate your real estate makes it property in a complete sense. If it is entailed it is only part property. The free possession of property, without feudal liens and tenures,—the dead hands of the past owners still clutching the symbol of their reflected being, — comes to existence only when a government of all the people, for all the people, and by all the people prevails, and when it is rendered possible through universal education. Who would own real estate in Turkey? Who would accept a Russian estate, on condition that he must live on it and assume its responsibilities? No one of us, I think. The quality of property,—its intrinsic value,—depends upon the quality of the community who recognize it. The status of the "reflected being" is the status of those who reflect it. Property in a refined and cultivated community is raised to a high potence of value; in a barbarous community it is not worth the risks incidental to its possession. In proportion as man is educated, he sees the substantial character of reflected existence, and this perception creates continually new kinds of property founded on new recognition,— bodiless possessions, "incorporeal hereditaments," that receive their substance from conventional recognition.

The growth of corporations is the wonder of this generation; they do what the individual never could do for himself, and yet needs to have done in order that he may gain freedom from thraldom to nature. The individual could not afford to obtain pure water from the distant hills, or establish gas-works, or own a railroad, or a telegraph, or express system. Corporations furnish him all these things. If corporations abuse their power sometimes, this is because society has not yet learned where to place legal restrictions upon them, and is another illustration of the necessity of education in the community.

Thus not only does the culture of civilization increase the alienability of property, and hence its value, but it develops into property a vast series of relations of the nature of franchises, which, in a rude, unpolished age, are mere rights of the strongest, and non-transferable to the common people. Hence property, in the highest sense, cannot exist except it be taxed for universal education. For universal education will not exist unless it is provided for by the State, and unless the State supports it wholly or in part by taxation.

Macaulay, in the House of Commons, in 1847, defending the minutes of the Committee of Council on Education, to which he, as member of the Privy Council, had given consent, gave a vivid picture of the condition of Scotland, contrasting the thriftlessness of a people before education was established by law with the thrift that followed government action in behalf of schools. He said:

> "It was at the end of the seventeenth century that Fletcher, of Saltoun, a brave and able man, who fought and suffered for liberty, was so overwhelmed with the spectacle of misery his country presented that he actually published a pamphlet in which he proposed the institution of personal slavery in Scotland, as the only way to compel the common people to work. Within two months after the appearance of the pamphlet of Fletcher, the Parliament of Scotland passed, in 1696, an act for the settlement of schools. Has the whole world given us such an instance of improvement as that which took place at the beginning of the eighteenth century? In a shorttime, in spite of the inclemency of the air and the sterility of the soil, Scotland became a country which had no reason to envy any part of the world, however richly gifted by nature; and remember that Scotchmen did this, and that wherever the Scotchman went,—and there were few places he did not go to,—he carried with him signs of the moral and intellectual training he had received. If he had a shop he had the best trade in the

street; if he enlisted in the army he soon became a non-commissioned officer. Not that the Scotchman changed; there was no change in the man; a hundred years before, Scotchmen of the lower classes were spoken of in London as you speak of the Esquimaux; but such was the difference when this system of State education had been in force for only one generation; the language of contempt was at an end, and that of envy succeeded. Then the complaint was, that wherever the Scotchman came he got more than his share; that when he mixed with Englishmen or Irishmen, he rose as regularly to the top as oil rises on the water."

Turning from this economical aspect of the question to the political requirements that specially concern our own people, we shall discover that we, in America, have much more to urge us to establish common-school education than this demand of the age of invention for intelligent labor. We have permitted universal suffrage, and the government of the majority. If we do not have universal education we shall all suffer for it. For we are tethered to the lowest stratum of our population, and must accept their influence in our politics. Nothing but education will ameliorate it.

The lover of his kind rejoices in the knowledge that here in America we have so organized our society that the welfare of the highest is connected, indissolubly, with the lowest, so that each and all must, in the main, see clearly that he is his brother's keeper, and realize the solidarity of the social whole. Each man is what he is, not through himself alone, but by and through the reflection thrown back upon him from the social whole in which he lives and has his being. Under monarchies and despotisms the same fact was true, but there was such a mirage created by the principle of caste that it could not be seen clearly except by deep thinkers. Here it is visible, for the common laborer is also a voter, and participates in making the laws of a free government.

We say, therefore, to the aristocrat who grudges his contribution to the common schools, or who looks askance and asks, "Why educate the children of the common laborers?"—for your own well being and the well-being of your children, the children of all must be educated. For here all, and not the few, govern. If you wish property safe from confiscation by a majority composed of communists, you must see to it that the people are educated so that each sees the sacredness of property and its service to the world in making available to each the industry of the entire population of the earth. The study of geography in our common schools is one long lesson in the dependence of each people on all others through commerce. The industry of each nation is not the industry of individuals to supply their own immediate wants, but an industry which pours its productions into the markets of the world, and in return receives its just share of the productions of all climes and seasons. Geography is the scientific presentation of this process of producing and distributing the material blessings of civilization. How this is all accomplished is stated in a systematic exposition addressed to the thinking intelligence of the child or scholar. For geography tells us what each place produces and supplies to the rest of the world, and thus exhibits the dependence of all on each and of each on all. Is there any study better calculated to interest him in the conservation of those great social institutions based on property? Not, indeed, unless it is the study of human nature as revealed in those best selections from literature contained in his school-readers. In his reading-lesson he finds the poetically-inspired expression of his deepest and purest feelings, of his subtlest insights, of his truest moral instincts. Out of the dim region of semi-conscious instinct they come forth to the light of conscious conviction and felicitous expression in words, — and all this through the study of reading in the common school! Here he gets not only social science, but also moral culture. The soul of the child of the common laborer kindles with aspiration as he reads burning words of patriotism and immortal valor, of disinterested heroism and self-sacrifice for others. He feels his inborn divinity as he reads of the triumphs of his race, and sees in the visions of poets the lofty ideal of the future set before mankind. All this is not wanted, we are told, in the children of the common laborers. If not, we are sorry for the person who does not want it. He is so blind that he does not see the shore of Charybdis when he steers away from Scylla, — he steers away from a restless and adventuresome class of people, but only to run into the evil alternative of a people leagued together against capital, full of communistic dreams about labor and wages, with no broad humanitarian feeling, with patriotism rooted out by international association against the rights of property. He is willing to have a proletariat elect his legislators, if only he can find cheap bootblacks and house-servants.

It is indeed a great thing to have even one class of society educated. No doubt all profit by it, even when the education is confined to the few. But in a democracy all must be educated. The interest of property demands it, the interest of the government demands it. And one generation of well-educated people in a State forces upon all adjacent States the necessity of public education as a mere war measure, as a means of preservation of the State. So also will the existence of one successful democracy force upon this world the adoption of democratic forms of government as the condition of their continued existence. An ignorant people can be governed, but only a wise people can govern itself.

Where all are educated, and directive power exists on every hand, it finds its employment chiefly in building up the wealth of the community. The directive power required every day to manage the large banks of this country, to direct the great railroads, or the manufactories and corporations of various kinds, is infinitely more than that required to direct our government. The management of the New York Central or the Pennsylvania Railroad system is as great an affair as the government of a small kingdom.

Self-directive intelligence makes for itself avenues of employment. Directive power is the only power that is never wasted.

Within the past twenty-five years great strides have been taken by European governments in establishing systems of public education. It has been seen, clearly, that unless the laborer was educated the industrial product would be inferior and come to be discriminated against in the markets of the world. Technical education thus began at South Kensington, for England, as it had been before established in France and Germany. The foresight of the Great Frederick, backed by the religious dogmas of Luther, secured general education to his people. The weight of the Prussian people in war came to be seen in their Austrian and French campaigns. Since these wars, public education has received an enormous impulse. Not merely the industrial success of the people, but national independence itself, seems dependent on the general education of the people.

The education of the people as a military necessity, although it has come to have a new meaning in Europe since the Franco-Prussian war, is not, after all, anything new. The directive power of a people has always been given the best education that the nation was able to furnish.

If we turn for a moment to the actual history of nations, we shall find public education in some sort or other always existing. The only point is to inquire in what does the directive power of this people exist, to find at once where the public money is used for educational purposes. In China, for instance, the schools are supported by the people in their private capacity. But the government rewards those successfully graduating by its offices. Hence, the money advanced for education is only an investment in public securities.

In all countries the military education is at public expense. Where does the support and education of the nobility and royal families come from except from the public? They do no immediate work. They are going to direct, and have others obey. But in our country, where each is born to all the rights of mankind without distinction, all must be provided for. Not by pauper schools, for that would be to burn into the public mind of the youth his misfortune, and he never would outgrow the stigma. Neither is it safe to leave the education of the youth to religious zeal or private benevolence, for then inequalities of the most disastrous kind will slip in, and our State find elements heterogeneous to it continually growing up.

The government of a republic must educate all its people, and it must educate them so far that they are able to educate themselves in a continued process of culture extending through life. This implies the existence of higher institutions of public education. And these, not so much with the expectation that all will attend them, as that the lower schools, which are more initiatory in their character and deal with mere elements, depend for their efficiency upon the organization of higher institutions for their direction and control. Without educating in higher institutions the teachers of lower schools, and furthermore without the possibility hovering before the pupils of ascent into the higher schools, there can be no practical effect given to primary schools.

If the monarchies of Europe think to put off the people with mere polytechnic and industrial education, they will find that they have fostered a directive power that will grope for and find the helm of State, and then attempt to administer the government. The mistake will then become visible. Man will not submit to be educated simply as a director of machines and instrumentalities of industry. He soon aspires to direct himself and be self-governed. To be sure there is a long step from the mere hand-laborer, the one who turns a crank or carries a hod, the galley-slave who works chained to his car,—there is a long step from the mere physical laborer to the director of a machine, to the engineer, the overseer of a loom, or the manager of a telegraph. The former is all hands; his own brain even is a mere hand, governed by the brain of another, who directs him. But when directive power develops so far as to direct and govern machine-labor, nay, even when it is so far cultured as to reach the principles of natural science and be capable of applying these in mechanic inventions, even then it is not at its summit of realization. It will stop at nothing short of the spiritual culture that makes it alike directive and governing in the sphere of mind, the realm of social, moral, and intellectual existence.

Human instruments, whether mere hod-carriers or locomotive-engineers, will not stay contentedly as instruments; they aspire to transcend their hard limits, be they ever so near or never so far off. The higher already, the greater the aspiration. Blind aspiration, from which enlightenment is carefully shut out, leads to July revolutions and reigns of terror; over the ashes of the burnt-out volcano of popular frenzy marches Napoleonic imperialism with cold, unsympathetic step toward the return of Bourbonism and absolutism.

Not only mechanical directive power shall be taught in the people's schools, but also spiritual directive power. The snobbery that patronizingly talks of the education of the lower "clahses" does not know that the industrial civilization it affects to admire is an instrument that only Democracy can wield; — leave out the humanities from that education, and you leave out the culture that can guide its course, and Communism and Socialism and abstract theories will find their way quickly into the heads of the laboring classes. No merely industrial education can prevent the mind of the people from being fly-blown with crazy political aud social theories, destructive to the State. Not merely natural philosophy, chemistry, mathematics, and biology must be studied, but likewise the science of society of the State, of art, religion, and philosophy, in all their phases. The great educators of the race,—Homer, Dante, Shakespeare, and Goethe, Plato, Aristotle, Leibnitz, and Newton, — these must be made accessible to the people. Each child must be waited on by the institutions of man and invited to see the spectacle spread out before him from the lofty summit of civilization; his human brothers that have added a cubit to the world's stature by their heroic labors, must be pointed out to him; the methods and results of their attainments must be revealed to him; noblest aspiration and earnest self-sacrificing endeavor must be aroused in him as the means of achieving his individual task in life. The whole world of the past and present is made, by education, the auxiliary of each man, woman, and child.

Is it not the duty of the State to make the practice of the good possible? This is the definition which a western statesman has suggested as a substitute for that other definition which says that a State exists for the protection of property,—"The State exists in order to make the practice of the good possible."

Says Macaulay, in the speech from which I have already quoted:

> "I hold that it is the right and duty of the State to provide for the education of the common people. . . . I say that the education of the people ought to be the first concern of a State, not only because it is an efficient means of promoting and obtaining that which all allow to be the main end of government, but because it is the most efficient, the most humane, the most civilized, and in all respects the best means of attaining that end. . . . Sir, it is the opinion of all the greatest champions of civil and religious liberty, in the old world and in the new. [Here he refers to the Pilgrim Fathers, and their insight into the necessity of popular education.]

. . . Those men, forever illustrious in history, were the founders of the Commonwealth of Massachusetts. But though their love of freedom of conscience was illimitable and indestructible, they could see nothing servile or degrading in the principle that the State should take upon itself the charge of the education of the people. In the year 1642 they passed their first legislative enactment on this subject, in the preamble of which they distinctly pledged themselves to this principle, — that education was a matter of the deepest possible importance and the greatest possible interest to all nations and to all communities, and that as such it was, in an eminent degree, deserving of the peculiar attention of the State."

To the believer in caste we would finally address ourselves. We would say: All the studies of the common school are conservative in their character, because they all open the windows of the soul and give the mind insight into the substantial character of the institutions of civilization. They all tend to produce the conviction that the well-being of man is best furthered by the very instrumentalities that have been discovered and elaborated by the race, and especially by modern civilization. Reading, writing, arithmetic, geography, history, and grammar, all open the soul to light on the question of subduing nature, or on the question of the character and destiny of the human mind as revealed in language or social usages, or political forms and changes. The good school, moreover, teaches industry effectually. But its industry is that of directive intelligence, because the progress of civilization supplies more and more the machinery to perform menial service, and makes it necessary to educate all into directive intelligence. Your opposition to the system of public schools may result in their loss of popular favor.

Their loss of popular favor will result in stinting their support, and decrease of appropriations will drive away the best and most enterprising teachers. But the final result will be averse to the education of the less intelligent classes. They will come by degrees to undervalue education altogether. The common schools being under the ban, there will be no pressure of public opinion to cause attendance upon them. Besides, they will be in reality inferior, because their excellence depends upon their patronage by the better classes in a large measure. That school which educates all classes in it is the most wholesome in its influence, because it helps the lower social rank by association with finer manners, while it helps the higher social rank by bringing it into a better knowledge of human nature by associating it with simpler and more direct manifestations of character, — the poor classes being better studies for human nature, because more impulsive and less under the control of social forms which disguise the manifestation of native inclinations and impulses. Inasmuch as the hope of civilization depends upon the elevating influence of the educated and cultured classes upon the lower and lowest strata, it follows that our educational system should see to it that the cultured class thoroughly understands and sympathizes with the lower classes, who lack knowledge or wealth, or both. I say sympathize, because I take it for granted that no American deems it desirable or possible to oppress the lower classes, and keep them down. We have universal suffrage, or something approaching to it. What we permit our neighbor to be, that we set up as the arbiter of our political well-being; for his ballot will determine our government.

The caste principle can find no encouraging sign for it above the horizon of the world's history. The foxes indeed have holes, and the birds of the air have nests, but the advocate of the principle of social inequality as the goal of education has no place where he can lay his head on this planet, and enjoy a sweet and refreshing repose. If he goes to Russia, there is the Nihilist and the boiling-up of the nethermost depths in the name of revolution and negation. If we must regard civilization as necessarily implying caste and inequality, says the Nihilist, let us place dynamite under the whole structure and blow it into the air. No peace there.

If the lover of caste and inequality as the goal of humanity goes to India, seeking his ideal in the country whose part in the progress of history was to differentiate this caste principle, and show it in its reality,—causes and consequences growing on the same tree,— there, too, he may no longer find the divine Brahminic code permitted in its fullest sway. It is in process of withdrawal from the face of the earth, thanks to the British administration of criminal law, and the conceded right to freedom of conscience. For the British aristocrat does not believe in the divine right of the Brahmin, descended from Brama's head, but finds the warrior's caste and the merchant's caste of equal or superior right, and he feels the necessity of recognizing the new avatara,—the eleventh avatara of Vishnu, under the form of the steam-engine,— the avatara of productive industry; and so he confers knighthood on great inventors and manufacturers,—as on Sir Henry Bessemer. As for the exclusiveness of the Brahmin caste, as it exists in England or Boston, why, any one may become a Brahmin, or learned pundit, by sacrificing with midnight oil to the knowledge of the modern Vedas; namely, to literature, science, or history. I India the believer in caste wavers, and then goes over to Mohammedanism, or at least over to Buddhism, which is the Nihilism of ancient times. For the Buddhist placed the dynamite of his doctrine of Nirbana under the caste system of India 2300 years ago. Those Nihilists were then driven out of India, but they can now have all their rights and privileges under Britsh rule.

Shall the lover of caste go to China? Alas, no! In China there is the possibility of ascending to any position short of that of Emperor by success in passing the four-fold system of examinations which are established underneath the national system of education. There is no rigidity to the caste system of China, seeing that it permits all to ascend, even from the lowest, and leaves it to each to determine his status by his scholastic triumph over the difficulties in the Chinese alphabet and the classics of Confucius and Mencius.

Does the critic of our school system who believes in caste, and asks, "Is it wise or best to educate our children beyond the position which the vast majority of them must always occupy?" suppose that reading, writing, and arithmetic are studies too high for the lowest mechanic or day-laborer in a country where his vote counts as much as that of the wisest and richest man? Or does he, perhaps, suppose that all the people are already past the three R's, and briskly advancing into the intricacies of philology and classical archeology? Who has told him this? The census of our country for 1870 said: "Of the population over ten years of age, 5,658,144 cannot write; 4,880,271 of these are native born, and 777,873 are of foreign birth; 2,750,000 of these illiterates are colored. The total population of the nation over ten years of age is 28,228,945. Hence 20 per cent. of the population over ten years of age could not write in 1870. In Massachusetts, even, there were 97,742 who could not write,—89,830 of these being of foreign birth, and only 7,912 being natives. Seven thousand is a large number for a State like Massachusetts. Twenty-three thousand illiterates were in Boston!

The census of 1880 tells us, again, that there are 6,239,958 persons unable to write, out of a total population of 36,761,607 persons of ten years of age and upward. Of these, 28,424 are in Connecticut!

The number in our common schools who are studying reading, writing, and arithmetic, chiefly, with a little geography and much less grammar, is so large that the balance who are studying the higher branches is pitiably small in comparison. In the great cities the number engaged in high-school and college studies is only one in ten in the most advanced of cities, and only one in fifty in the average of cities. And yet our dreamer of caste and inequality mutters in his sleep: "The cruel suspicion is forced upon us that our present educational system largely unfits young people to deal with the actual necessities of those who are to earn their own living. It takes away self-reliance, begets conceit, and draws attention to what is ornamental rather than fundamental." Reading, writing, and arithmetic, it seems, are not practical enough because they are general disciplines, and give directive power to all who possess them. The one in fifty who is studying algebra and Latin is grudged his privileges. A knowledge of hod-carrying is more practical than writing!

When, in 1843, the English Parliament were debating whether the sum of £30,000 should or should not be appropriated "for the encouragement of schools for the common people," and when they had just appropriated £60,000 for the support of the Queen's horses and hounds, Thomas Carlyle, then writing his soul-stirring book on *Chartism*, set down in letters of fire these words on the general humanitarian aspect of the question of government support of education:

> "Who would suppose that education were a thing which had to be advocated on the ground of local expediency, or, indeed, on any ground? As if it stood not on the basis of everlasting duty, as a prime necessity of man. It is a thing which should need no advocating, much as it does actually need. To impart the gift of thinking to those who cannot think, and yet who could in that case think; this, one would imagine, was the first function a government had to set about discharging. Were it not a cruel thing to see, in any province of an empire, the inhabitants living all mutilated in their limbs; each strong man with his right arm lamed? How much crueller to find the strong soul with its eyes still sealed, its eyes extinct so that it sees not. Light has come into the world, but to this poor peasant it has come in vain. For six thousand years the sons of Adam, in sleepless effort, have been devising, doing, discovering; in mysterious infinite, indissoluble communion, warring, a little band of brothers, against the great black empire of necessity and night; they have accomplished such a conquest and conquests, and to this man it is all as if it had not been. The four-and-twenty letters of the alphabet are still Runic enigmas to him. He passes by on the other side, and that great Spiritual kingdom, the toil-won conquest of his own brothers, all that his brothers have conquered, is a thing non-extant for him. An invisible empire; he knows it not, suspects it not. And is it not his, withal; the conquest of his own brothers, the lawfully acquired possession of all men? Baleful enchantment lies over him, from generation to generation; he knows not that such an empire is his, that such an empire is at all. . . . . Heavier wrong is not done under the sun."

One voice, the voice of Christian humanitarianism, says: Teach aspiration for all that is good and noble and divine; teach it to all, even the lowest. Teach all to desire with an unquenchable hunger more wisdom, more knowledge, more command over nature, more elevation of position, more usefulness, more directive power. The other voice says: Be contented to remain at the bottom, and quench all aspiration. All talk about perpetual growth in knowledge and wisdom is nonsense, and worse, when addressed to the children of common laborers.

The reason that the first voice gives for its creed is that its faith teaches the divine origin and destiny of the soul, and that the goal of civilization is the emancipation of each from all debasing servitude of body and mind, and that it is the Christian duty of all to help their fellow-men to rise. The reason given by the other voice is the necessity which it feels that there shall be a class in society perfectly contented to be menial servants, and fitted for nothing above that office.

The critics of our educational system are never done with telling us that its results are to make the rising generation discontented with its lot. As if this were a defect rather than the greatest glory of an educational system! What place is there in our system for a drone who is utterly devoid of aspiration? To be like dumb, driven cattle,—is this permitted or encouraged in a Christian civilization? Man is immortal, and has an infinite destiny,—this is the burden of Christian teaching. In consequence of this, Christian civilization strives toward the heavens; it subdues nature and makes natural forces toil for it, and procure food, clothing, and shelter for the body. It continually turns out the drudge from his vocation, and says to him: I do not want your mere bodily toil at any price; I have a machine that can do such work better than the like of you can, and at less than what you would call starvation-wages. Up, therefore, and acquire directive intelligence so that you may manage and direct this machine, and other machines; for presently we shall need no more mere hand-labor, but require all to be intelligent and directive."

As made in the image of God, and as destined for His eternal kingdom, is it possible to look upon any education that schools may give us as too high for the position to which a human being is called to occupy in life? In view of the necessity for educated directive power in an age of productive industry, when the superintendence of machines is the chief industrial business, is a general education that gives one insight into nature and insight into the human mind too much? In a representative Democracy, in which the laws that govern property and personal rights are made by the representatives elected by all the people, including the humblest citizens of the country, is any education too good for the people?

The American people answer, No.

BERNARD MALLON.

BY CHARLES W. HUBNER, ATLANTA, GA.

In Oakland Cemetery, Atlanta, Georgia, on the brow of a gentle slope, and overlooking this beautiful "God's Acre," stands a monument whose inscriptions speak, indeed, "the truth, the whole truth, and nothing but the truth." The inscriptions are as follows: On the west side, "Erected by the Teachers and Pupils of the Public Schools of Atlanta." "Our First Superintendent," and, in large letters, "Mallon." On the north side, "Bernard Mallon, born in Ireland, September 25, 1824. From November, 1848, a citizen of Georgia; died in Texas, October 21, 1879." On the south side, "A trusted Leader among Southern workers in the cause of popular Education for thirty-one years. As Teacher and Superintendent he devoted his life to organizing Public Schools in Georgia." On the east side, "Patient and wise Teacher, he loved God and little children. Gentle and pure man, Honor was his shield; his golden motto: Duty without Fear."

There, reader, is an epitaph thou canst be proud of, if thou hast in thy soul reverence for the divine right of honest manhood. Where is the King's grove that can show the like of it? What is the tinsel and emptiness of the so-called "Great" to the glory of such a life? A farthing candle beside the midday sun! "He loved God and little children." "Patient and wise Teacher." "Pure man." "Duty without fear." Ah! thou canst cover the space of these little words with thy open hand; but who shall measure their meaning, broad as humanity, deep as the soul, high as heaven? Aye, bare thy head reverently, for thou standest in the spiritual presence of "an honest man, the noblest work of God,"—in *this* dust lives the immortal!

As an infant, three years old, Bernard Mallon was brought to this country. His infancy and boyhood were passed in the State of New York. His opportunities for receiving an education, during that period, were not very favorable, but being a bright and studious boy he made the most of them. His public-school education was supplemented by diligent self-culture. Early he displayed the germs of those elements which, in his future career, distinguished him as a teacher and a leader in the cause of education. At sixteen he was sent to Union Village Academy, where he was soon employed as assistant teacher in English branches. At twenty-six (1850) we find him in Savannah, Georgia, teaching a private school for some years. He then became associated with the late John B. Mallard, Esq., in the Chatham Academy. In 1854, at the solicitation of the Savannah Board of Education, he established a public school, the nucleus of the present fine system of schools in that city. In the following year, in order to make himself still more efficient in the performance of his duties, he resigned his position, and spent a year at Brown University. His ardent thirst for knowledge, keen, incisive intellect, and complete devotion to the profession which he, long ago, had felt to be his life-work, enabled him to overcome almost entirely the deficiencies of his early scholastic training, until he was justly ranked in after-years with educators of the ripest culture in the practical duties of the school-room and the normal class.

He returned to Savannah accompanied by his bride, an excellent and accomplished lady, the choice of his heart, whose wifely devotion gladdened the busy years of his life, and who cherishes his memory with deathless affection. In 1855 he established the Massie School, another link in the Savannah public-school system. Thenceforth, with slight interruptions, he was identified with the public schools of that city, successively filling every position; and, finally, as Superintendent, directing their successful operation. In 1863 a number of prominent citizens of Savannah removed their families to Whitesville, a village thirty miles from the city, on account of the presence of the Federal fleet at the mouth of the river. Mr. Mallon was induced to take charge of Guyton Academy at Whitesville, acting also as Superintendent of the Sunday-school of the Baptist church during his stay, a position he also held during his residence in Savannah. He remained until his death a member of the Whitesville church. In 1864, responding cheerfully to the call of his adopted State, when the whirlwind of war was devastating it from the mountains to the sea, he left his village school, shouldered a musket, and served in the trenches around Atlanta. But his frail body soon succumbed to the hardships of a soldier's life, and he was compelled to return to Whitesville, shortly thereafter settling again in Savannah.

When Atlanta, in 1871, determined to establish public schools, Mr. Mallon was called to undertake the work. He accepted, and in the fall of that year entered upon his duties in this city.

Mr. Mallon's memory is revered in Savannah; loving testimony as to his character as a Christian gentleman, and to the inestimable value of his services as the founder of its public schools, is given in the resolutions adopted at a meeting of the teachers of that city, upon the news of his death.

At Atlanta a grand man and a grand opportunity had met. It was felt at once, by all who critically and with solicitude watched the birth and growth of the new public-school system, that a master-mind was planning the structure, that a potent hand was directing and a vigilant eye observing every part of the complicated plan. The masses, for whose especial benefit the system was designed, felt all this instinctively. Many were the difficulties to be encountered, great the obstacles that obstructed the way to success. He evaded the one skillfully, or overcame the other manfully, He secured at once the confidence and hearty support of his co-laborers in the important work, and no man ever won more completely the love and admiration of a people than did the founder of the greatest public institution of the capital of Georgia.

Mr. Mallon appeared to be ubiquitous. Everything and everybody was vitalized by his spirit. His enthusiasm was infectious. You could not be in his presence ten minutes without feeling that magnetic personal influence which is the gift of the few who are predestined leaders of men and moulders of public opinion. His was the quietness, the depth, the breadth of the mighty river at its mouth; not the prattle and shallowness and narrowness of the fountain-rill at its source. He knew men and women intuitively, their capacities and limitations, their suitableness for certain work; and, by the help of this absolutely essential element of an organizer and leader, he surrounded himself with a corps of teachers who did credit to his sagacity, and materially assisted him in securing the illustrious success with which his life-work was crowned. Veteran and recruit were plastic material in his shaping hand. He inspired them all with the genius of their noble profession; he made them feel the dignity and importance of their position. With him theory and practice went hand in hand. He made teachers to be in love with their work; for, without love,— aye, passionate love,— no genuine success in any sort of work can be achieved. He refined the crude; he encouraged the diffident; with golden words of praise he rewarded the meritorious; the erring he reproved gently; the obstinate he removed with equal tenderness and firmness when his judgment and the good of the cause demanded the ultimate exercise of authority. What else but success can be the outcome of wise men's administration of private or public affairs? This was preëminently the result of Superintendent Mallon's administration of the public schools of the city. Year after year this prosperity increased; more fruitful of good did they become; more efficient the teachers, better the methods, broader the scope, firmer the foundations, smoother the workings of the complicated machinery, more popular than ever with the people, the system, and the patient, refined, womanly, modest, tireless, feeble-bodied but heroic-souled man, to whose genius and rare practical sense the wonderful success of the schools was due, as the instrument and medium of the wise public spirit which had established and still maintains them.

Splendid offers to other fields, at double the salary he was receiving, urged by such men as the late lamented Dr. Sears, were respectfully declined by Mr. Mallon. For eight years he continued to toil and triumph in his work of love among a people who loved him as few men have ever been loved anywhere. The children venerated him as a father; his teachers were to him as a body-guard of honor; and the system of schools elicited the unqualified admiration of distinguished educators at home and abroad. It seemed that he had, indeed, reached the goal of his dearest hopes, the height of his grandest ambition. But a shadow fell upon his way. Unfortunate complications, growing out of official disagreements, hampered him; his sensitive nature received wounds which bled in secret, but of which few, even of his most intimate friends, knew of *through him*. He felt the "slings and arrows of outrageous fortune," but bore them as a man should. "Every victor's crown is lined with thorns," but royally he wore his all the same, and more than royally did he abdicate the throne which he had erected in the hearts of our people, and which is still his, though the kingly man who once occupied it has exchanged the earthly insignia of sovereignty for the crown and sceptre of immortality. Feeling that under these untoward circumstances his usefulness in Atlanta would be seriously impaired, and having some time before received a pressing invitation from the State authorities of Texas to take charge of the Sam Houston Normal School, he sorrowfully accepted the munificent offer, and resigned his charge in Atlanta. Said he to a friend, with tears in his eyes: "I had hoped to be able to stay here and finish my work and my life in Atlanta, but I cannot remain with self-respect any longer. And yet I carry with me hope that, after awhile, I may be able to come back and live and die with the people I love so well."

Accompanied by his devoted wife he went to Huntsville, Texas, to organize the State Normal College there. Heroically and successfully he worked for two months. But the hand of inexorable Death was upon him. He battled bravely against the fever that was devouring his life; the end came, and the peace of God fell upon him October 21, 1879. His death was calm. It was the serene closing of a grandly useful life. A smile, radiant with the glory past and the greater glory yet to come, passed over his pallid face; his breaking eye turned with a last, fond look toward the wife of his bosom; there was a tender touch of the hand, a whisper, indicating that his thoughts had turned to the schools of Atlanta, and the children he loved so well, and lo! the pure spirit of Bernard Mallon had passed from earth to heaven.

The Governor, the State Board of Education, and the students of the Normal College publicly expressed their appreciation of President Mallon's eminent worth, and testified to the loss which Texas had sustained by the sudden removal of one whose labors in the cause of education promised to be of so much benefit to the State.

The grief of the people of Atlanta over the untimely death of Mr. Mallon was profound and universal. The people mourned the loss of a public benefactor; the children grieved as for the death of a father. The resolutions passed by the teachers of Atlanta, commemorating his virtues, and extolling the rare elements which made him the model Superintendent of the South, are nobly expressed and worthy of the man and the occasion. Distinguished educators, and the leading educational journals of the country, bore testimony to his excellence as a teacher, and to the value of his life-work. Professor W. Le Conte Stevens, of New York, gives voice to this feeling in the following: " Mr. Mallon was one of the foremost educators and noblest men that I have ever included among my friends; one whose example, whose sympathy, whose words of appreciative encouragement and unobtrusive advice, have served as an inspiration. There is none to take his place as a friend, as an educator, as a whole-souled, earnest, liberal, honest man." Two brief incidents will touchingly illustrate how Mr. Mallon was loved by the children; a correspondent writes: " When the news of his death first came some little children in one of the grammar schools went unprompted to their teacher, with a little handful of dimes and half-dimes, and asked her to send them to Mrs. Mallon, to help build a monument to him. The colored children, too, went crying to his grave. In one of their schools, when their teacher announced his death, there was a long pause of deep feeling, when a very black boy arose in a far-off corner and said: 'Teacher, was not Mr. Mallon, next to Mr. Lincoln, the greatest man that ever lived?' "

Beautiful tributes were also tendered by the Board of Directors of the Ladies' Benevolent Home, of which Mr. Mallon was for years an active member, and by the Directors of the Young Men's Library Association, of which flourishing institution he was successively a director and the president.

His funeral was the grandest ever seen in this city. Over ten thousand people, embracing all classes, followed the remains to the grave. The public exercises took place in the City Hall Park. Three thousand children were massed around the platform whereon the coffin lay. Many distinguished men were present, and the State and city governments were represented. Rev. Dr. Tucker, ex-chancellor of the University of Georgia, conducted the divine services. The speakers were Governor Colquitt, Rev. Dr. Haygood, president of Emory College, and Mayor Calhoun. The addresses of Governor Colquitt and Dr. Haygood, for pure and exalted eloquence, have been rarely excelled. "Bernard Mallon," said Governor Colquitt, "walked along the furrows of life sowing seeds in the hearts of the youth of his country. He has gone, but the harvest is yet to come in the lives of noble men and lovely women. His labors are over! He needs no trumpet to sound his fame, for his memory lingers about every hearthstone in this city with the sweetness and fragrance of a hidden bank of flowers. He lives in the hearts of these youths, these boys and maidens, and in long after-years they will look back with tears and gratitude to the teachings and example of Bernard Mallon, who lies speechless here to-day. He has gone to his reward. From teaching here he has gone to learn the lessons of immortality over yonder. God grant that you all, young and old, shall so treasure the precepts of his life and imitate the virtues of his walk that you, with him, may have joy immortal in the land to which we are assured he has gone."

"There is this about men like Bernard Mallon," said Dr. Haygood, "we never know how we love them until we lose them. As England's poet-laureate said of the Prince Consort, one of the noblest and gentlest of gentlemen, we may say of him:

'We have lost him; he is gone;
We know him now; all narrow jealousies
Are silent; and we see him as he moved.
How modest, kindly, all-accomplished wise!
With what sublime repression of himself,
And in what limits, and how tenderly!
Not swaying to this faction or to that;
Not making his high place the lawless perch
Of winged ambitions, nor a vantage-ground
For pleasure; but, through all this trust of years,
Wearing the white flower of a blameless life.'

"When Cæsar had his triumphs captive princes followed at his chariot-wheels, but I would rather have to follow my bier to its last resting-place these thousands of weeping children than all the princes and banners of victory that followed Cæsar in his marches."

The procession was nearly a mile in length. A special lot was donated for his burial by the City Council, and the courts adjourned in respect to his memory. A touching feature of the obsequies was the genuine sorrow manifested by the colored people, in whose behalf, and for whose educational welfare, Mr. Mallon always labored with great zeal and success.

The beautiful monument which now marks his grave was made in Italy, and paid for by contributions from all the children of the public schools of Atlanta and the teachers. Shortly after its arrival it was dedicated, in the presence of a large assembly, with appropriate ceremonies, and brief addresses by Professor Bonnell, principal of one of the grammar schools, and Judge Mallon, of Cincinnati, a brother of Mr. Mallon. No memorial to the dead in Oakland Cemetery is visited more frequently by citizens and strangers than this. To the children of Atlanta it is a Mecca, to which they love to journey, to read the inscriptions with tearful eyes, and to keep the sod above the beloved dust bright and fresh with evergreens and fragrant flowers.

The writer will close this necessarily brief and altogether inadequate sketch of the grand life and blessed labors of Bernard Mellon, with whose friendship he was honored, and whose memory is to him a sacred legacy, with the memorable words spoken by Mr. Mallon in a lecture delivered at the Emory Normal School: "In education the main object is the development of character, and to accomplish this we must ourselves be pure, and good, and true."

MOTHERS AS EDUCATORS.

BY MRS. D. H. R. GOODALE, MASSACHUSETTS.

I. — The Mother's Equipment.

The great work of education, in a broad sense, must, in the nature of things, come primarily to mothers. The mother looks at it from the unprofessional side; she takes it up through her emotional life, and it is inter-penetrated for her by the deep solicitude which she feels for the dearest of those cares and interests which make up her life. With this, as with every subject, there is something to be gained by looking at the matter from various points of view. It is impossible quite to reverse the positions of teacher and taught; the child is unable to express in words the bearings of the question upon him, and we outgrow ourselves so fast that we cannot return to his standpoint; at thirty it is impossible to see life in the perspectives of thirteen. The mother takes up, in her estimates, the child's point of view through her sympathy and fuses it with her own. To her knowledge, science, may be precious, but the human element lies much nearer. It is, indeed, an excellent thing to gain information, but it is not the only, or even the most important, object of education. It is not half so fine an achievement to make a scholar as to make a true man or woman.

As the teacher derives authority from the parent, the parent is the natural and the highest supervisor of schools. The school, the university, is but a corollary of the home. Each generation owes to the next the gains of its own experience and all the assimilations of the past. These obligations lie especially upon parents, and the faithful teacher, of whatever degree, is a guardian of this sacred trust.

The mother's anxious care is for the healthy moral, intellectual, and physical *tone* of her boy or girl. She justly feels that a shade of variation here is of more importance than a large margin of mere acquirement. The intimate knowledge which is her privilege cannot be expected of the teacher. It is the mother, therefore, who must so guide the child's course as to maintain those conditions upon which a perfect development will depend. She, in the mysterious round of life, stands nearest to her child, and should know his needs better than any other; she, more than any other, must be able to judge of the fitness of all that he receives to nourish his true growth. She not only gives him life, in a human sense; she must lead him out,—give him to himself and to the world in the full stature of his germ-created being. What human trust is graver or more important than this of mothers as educators?

It would be idle, in the light of to-day, to question woman's share in the serious duties of life. The old theory of her weakness and dependence, which made her at the best something graceful and charming, like a flower in the window,—at the worst a very millstone round the neck of father, brother, husband,—is now seldom asserted. (Doubtless nature always made her unlike and better than an unnatural theory, but to have to live well in spite of our theories is to carry unnecessary weight.) The innocence of unconsciousness is beautiful and touching, yet it is inevitably narrow and self-centered. The true purity is the helpful purity of one who has knowledge of evil, and has also moral strength to reject it. One must have some knowledge of human nature in order to be largely useful to others; it is a gift to be desired of the gods, though with awe. The wish, the attempt, to hold wives and mothers aloof from the actual necessities, the hard facts of existence, is mere sentiment and folly. Worse, it is wicked, for it is keeping her from her true place and her true work in the world. However generous the love may be which would make her too pure, too tender, to mix with real life, it is mistaken. And the attempt is hopeless. Woman cannot avoid these burdens if she would. God brings his work and his word to her soul, however sheltered in happy homes and hedged in by love. The most difficult problems stare her in the face when baby-fingers cling to hers, and fathomless baby-eyes are lifted to her own. The weak and the helpless everywhere appeal to her. The aged, the neglected, the fallen, the hopeless look unto her. In this thronged, strenuous age, amid the din of hard-pressed industry and struggling competition, the work that men leave undone cries aloud unto women. More and more in the humanitarian, social, and educational movements of the age, questions are offered and work demanded which tax all her powers of mind and heart to meet. What preparation does woman bring to this life-work?

Few thoughtful persons will deny that she must share equally the real duties of life; that the only measure of her work is found in the depth of her earnestness and capacity, the breadth of her sympathies. But it is especially in relation to her children that we wish now to consider her. As a mother, as an educator, do not the inexorable needs of her position give her the fullest right to all that training can do to fit a human being for the responsible exercise of energies and powers?

Too often the young mother has scarcely thought of her duties in a serious or intelligent manner, when, in the evolution of her life, she finds herself charged with these solemn responsibilities, these immeasurable possibilities. She is herself fresh from the schoolroom, or from the absorbing lightness of "society;" assume that she has true maternal instincts, has she the requisite knowledge? Does not common sense tell us that the probability of these functions and offices of maternity, which is the very basis of society, gives woman an unmistakable claim to the higher education? For how shall she form other minds, her own unformed? How shall she impress right views of life, of its true honor, its worthy aims, upon her children while her own views are in the worst sense childish, narrow, inconsequent, unreal?

What she is must determine the character of her work. However much we may wish, we can only give of that which we have. It is true of a sex, of a class, of a race, that elevation must be growth. It must come from within, from the swelling of the germ, — it must be developed, not added, learned and not taught. But all opportunities should be open to her, that she may assimilate that which she requires,—that which is meant for her. It is not much, perhaps, to a woman whose life is to be filled with the small details of homely duties, to have accumulated a large store of acquired information. All knowledge is intrinsically precious, but this, in itself, is not what she specially needs as preparation for her life-work. But what is a liberal education? Is it not, in its fruits, a comprehensive grasp upon life? It gives us a clue, if no more; it puts in our hands the threads which lead to the best resources of the race. By it we gain access to whatever mankind has learned, has done, has gained. Whatever highest and most satisfying pleasures, whatever deepest and truest consolations, whatever hold upon the real, the imperishable, man has attained, we may thus draw to ourselves, to arm and and sustain us through the battle of life. For it is a tremendous battle for woman as well as for man.

All that education can give, both by way of suggestion and discipline, the mother needs to make her capable of her own best. The wise old maxim, *Know thyself*, seems too like irony applied to her, so little is she aware of her own possibilities. How many bright and charming young women we see, full of capacity, but sadly untrained; whose fine natural gifts remain inert chiefly because their possessors do not themselves understand or appreciate them. Too often in domestic life they become absorbed in its lower cares, and by their example and influence give point to the cruel sarcasm that makes of a devoted wife and mother "a mere drudge." The mother in the home is the central unit of the life there. It is not safe for her to underrate her true importance. Her tact, her tenderness, all the winning attributes which help to make life sweeter and nobler, all her natural graces are important factors in her influence here; but are they enough to strengthen her hands for the work she has to do? No; mature thought, liberal culture, wide knowledge, are not too much for her. To influence her children, a mother has need of the fullest wisdom. We can do little for them save as we have ourselves learned the great lessons of life; we must translate them in daily living for the young immortals who imitate long before they comprehend. It is easy for an unselfish woman to ignore her own gifts, to deny her own tastes, and to care less for making the most of herself than for the comfort, even for the very small comforts, of those dear to her. But is it right or wise? The mother who does not give her children high views of life will give them low views of life. If they see her hurried, worried, absorbed in the multitudinous cares of the household, thinking and caring for little else, these petty and material things will come to represent for them the all of life. When trifles are inordinately magnified, the higher ends of existence are lost sight of. What we owe to ourselves we owe to God. The mother who does not do her best for herself cannot do her best for her children. She should insist, if necessary, upon time and means for individual improvement, growth, and a reaction. She should fearlessly take her part in the higher life of the age, and spend upon such objects as are the best pursuits of the best men, the time, thought, and money which are now squandered upon the trifles which make woman small and keep her small. When we have all learned a little more practical wisdom, we shall be braver and more steadfast in our determination to live out our own lives, clearly and openly, based upon the best we know, and firmly ruled by our own convictions of right. In that ideal rule, justice will have as absolute sway in the moral world as does the law of gravitation in the physical.

It is in clear conceptions of her own that woman is weak. Her judgment leans too much upon others, trusts too much to precedent and authority, real or assumed. It is this which makes fashion so great a tyrant, and folly so tenacious of life; which sets conventional propriety higher than virtue, and awkwardness lower than vice. She must learn that no one can think for her. It is for her own peculiar work that she needs the highest development possible to her. Even mother-love, without sound judgment, which is reason in its highest exercise, is not respected. The present questioning and sifting of religious thought shows that even in the love and aspiration with which we turn toward the divine, we demand the support of reason. Neither heart nor mind can be put to its best use without the other; it is vain to attempt to divorce them. The most highly educated mother,—she who is most completely developed, in fullest possession of her own mature powers, will approach her work with as much awe as the gentlest young creature whose fond heart scarce knows any feeling save the all-possessing craving for tenderness and affection. It is indeed the noblest and most cultured who take up these tasks in the deepest humility. To a woman like Margaret Fuller, who stands as a type of high intellectuality, no voice of nature or of art spoke with such power, either to rouse to heroic action, or to soothe with sweetest solace, as the cry of her little child. The careless, the too bold, are those ignorant creatures who, knowing nothing above the lowest plane of physical wants, intrenched in a hopeless conceit, can never be other than blind leaders of the blind. Even for these, perhaps, their own limitations are their justification. Doubtless the clear-sighted, the intelligent, are those who will be held to the strictest accountability. These must be true, not only for themselves, but for all other women.

If God made man and woman unlike, for different work,—and this we believe,—then no man can teach woman what she most needs to know. In the fields of life there is a great realm of common riches, common pursuits, which may be shared or divided in a thousand varying proportions to mutual advantage and delight; but for her most specific and individual work she can take her orders from that power alone which rules all. She must see clearer, determine more firmly, act more enthusiastically and devotedly on her own true lines, than man can do or can suggest. She must make her own standards, her own methods. We must learn to depend, under God, upon ourselves.

Woman is by nature teachable, quick to follow; it is not so easy for her to be strong, fit to lead. Yet this is what it means to be a true mother.

Then, for the sake of childhood; for the sake of man's best interests and noblest objects; for his own sake, too, let every opportunity of culture, of vigorous training and advancement, be as free to girls as to boys. Not that woman may learn to be pushing, in a world of vulgar jostling and struggle, but that she may be better fitted for her purest, most unselfish, most helpful and sacred work. There is no danger of making her less womanly. Nothing can take from her her feminine character. It is her nature. The grafted apple-tree does not forget to blossom in May; the orchards that will ripen precious fruit are not less fair or less fragrant than the neglected seedling by the pasture wall.

THE DEVELOPMENT OF THE INDIVIDUAL.

BY ISAAC DENNETT,
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The proposition which I shall discuss is, that *universal individual development, which is only another term for universal individual freedom, is inseparable from and coincident with universal individual education; and that the education of the masses must be accomplished, if at all, by the State providing in a civil, rather than in an ecclesiastical capacity, a free system of universal individual education, extending from the primary school to the college.*

The term "free" is only incidental, since any system of education, to be universal, must practically be free to the individual. The advocates of universal education, at the State's expense, as the chief factor in promoting universal individual development, challenge the criticism not only of India, but of America as well. But a clear apprehension of terms will enable us to turn from the criticism of words to the criticism of ideas In the course of this discussion I shall find it convenient to make use of the terms "elementary," "secondary," and "superior," as applied respectively to primary and grammar schools, high schools and academies, colleges and universities. I shall also use the terms "State," and "individual," in such connection as to raise the question, "Does the writer intend to prefer individual liberty to the permanence of the State?" The answer depends upon the meaning we give to the term "State," and whether that meaning is of universal application.

For illustration,—suppose we say that the State is the whole people united under one form of government, whose chief aim is to perpetuate its institutions; and suppose we apply this definition to India, Germany, France, England, and America; now we do not prefer individual development to the permanence of the State; for the definition recognizes that States, like the Sun, have a right to live, even though in the process millions of individual atoms perish.

But suppose we say that the State is the whole body of people united under one form of government whose chief aim is, in the fullest degree, to develop and perpetuate individual liberty, and suppose that we apply this definition to India. Now we do place individual development above the welfare of the State, and when better conditions can be secured, India, as a State, ought to perish because it hampers individual progress, and the individual has a right to live under conditions favorable to his development. Again, suppose we apply this same definition to Germany, England, and France; our reply is that, just so far as these nations recognize and promote universal individual development they have a right to exist, and just so far as they have denied this principle, they and individual development are at variance, and the latter is, of right, paramount; and if-as we believe, the United States is the champion of individual liberty, not license, then there is no variance; the State and the individual are one,—one not because the State reduces the individual to a servile position in order to sustain musty institutions, as in India; not because she assigns him his place by the laws of inheritance as in Russia; not because she monopolizes his service from boyhood, as did Sparta; but one because she has made the individual intellectu, ally and morally free, and because he is free, patriotism inspires him to protect his country with the resources she has given him.

> "The country that has made me free,
> Her freedom 's dearest unto me."

If permanence, founded upon *custom*, rather than upon *individual liberty*, is the chief factor to be considered in a State, then China "bears the palm alone."

When the primitive world slowly and only partially cast off the shackles forged by Egyptian and Chaldean jugglery and divination, it raised its eyes to catch the first faint glimmerings of an imperfect light, whose rays emanated from a torch held in the hand of an ignorant, designing, and inefficient priesthood; but that same torch, with a more perfect light, and held in other and better hands, has guided us on our way, and has enabled us to become the exponents and promoters of universal education. But, while we congratulate ourselves upon the present, we may not turn disdainfully to the past, we may not forget that the educational systems of Oriental nations are exerting a powerful influence upon the nations of to-day. Persia was the first to recognize and enforce the great principle that it is the business of the State to educate its citizens, and we of America send our voices across the abyss of ages and the eternity of the past, and say to that ancient Oriental people, "Your principle of State education is sound." But Persia, unlike America, does not recognize the right of individual development; she cramps the powers of the individual in order to make him subserve the interests of the State, while America develops the powers of the individual to enable him to subserve the interests of humanity. Therein is contained a principle which I leave for the advocates of a restricted elementary education to ponder. Accursed be that State, ancient or modern, in which neither vice nor virtue, neither incapacity nor ability, can change the position to which the individual is born, which sacrifices individual thought, action, aspiration, freedom, to the perpetuation of its time-ridden and worthless institutions! accursed be any State which gives to the individual instruction just sufficient to prevent his realizing his own ignorance, and thus closing the pathway to his highest development!

Egypt, with her feticism, her priestcraft, her wisdom, is a connecting link between the educational systems of the extreme East and those of Greece and Rome; nay, I may say she is the link that binds the education of the East to the learning of all Christendom. From her treasure-house Egypt poured forth priceless blessings upon Greece, and made it possible for the historian to say, "Pythagoras was the first Greek in whom the spirit of the East was united with that of the West, and in whom the culture of Babylon, Egypt, and westernmost Asia combined to develop that of the Greeks in a new and glorious form." Centuries after, Greece in her gratitude, in her benevolence, in her learning, repaid wisdom's debt; she remodeled the system of Egyptian education; she made Alexandria forever famed for its science and literature; and, as the pagan philosophy connects it with the past, so does the Christian philosophy make it one with the present, and the pagan and the Christian meet at Alexandria and unite in revering its science, literature, philosophy, and truth. Individual freedom, when an infant neither strong nor vigorous, was washed ashore on the Ægean coast:

"An infant crying in the night:
An infant crying for the light:
And with no language but a cry."

But that infant cry, first heeded by Greece and then by Rome, placed those countries far in advance of other nations of their time; that cry produced orators, philosophers, and jurists, and caused Cyrus the younger to rely more upon the fidelity of ten thousand free Greeks than upon the time-serving of one hundred thousand Persians; and if, from those times, anything of special value has come down to us, it is bedewed with the infant tears of individual freedom.

From the second to the thirteenth century of the Christian era is the darkest known page in history. It is the embodiment of a human cry for liberty stifled in the utterance by tyrants who knew no mercy.

Let the thoughtful, zealous student that loves his kind read that record, and he blots it with his tears. But ancient Greece and Rome and ideal individual liberty, begotten at the birth of Christ, are the prismatic powers whose rays, cleaving the darkness of that age, illumine the canvas of the centuries beyond; and, as the centuries advance, the colors deepen until, upon the canvas of the nineteenth century, are painted all the tints of the rainbow, and every one of those colors represents individual freedom. But what do the free Greek and Roman,—what does the oppression of twelve centuries, —what does the individual freedom of the last six centuries mean? Do they mean that, as a nation grows older, it must necessarily grow freer and better? If so, how shall we catalogue modern Greece and Rome and Turkey? They mean that just as individual education has been limited or has been universal, individual freedom has coincided with it. This is no mere assertion. An education which fostered ambition, and created in the individual a desire to sway the physical by the mental power, made the ancient Greek a free man. In Europe the first twelve centuries were characterized by an almost universal ignorance; in the thirteenth century the University of Oxford, by harmonizing the Barons, north and south, made it possible for them to wrench from King John the great charter of English liberty. Italian learning of the fourteenth and fifteenth centuries prepared the way for the Reformation and the scholarship of Germany. You have not the patience, and I have not the space, to follow the progress and the universality of education in Europe from the Reformation to the present; the world-wide reputation of Dutch scholarship; the German schools for universal public education, which are unrivaled in the general development of mind, and, the Germans say, in morality; the revival of education in France, such a revival as will never again brook the rule of a Napoleon. Neither can I follow consecutively the development, or rather the restrictions upon the development, of universal education in England; but the history of England, Germany, and France will always be a standing monument of the inability of any ecclesiastical power, even when backed by the machinery of the State, to maintain, successfully and efficiently, a system of universal individual education.

I am aware that the "practical" man may say, "It is well enough to talk of the coincidence of individual freedom with individual education, but when a man possesses his civil, political, and religious rights, he has all the law ought to give him." This is plausible; but no State ever yet *gave* a man rights of any kind. Human rights are from within, divine and universal, and their development by a system of education makes men free. The United States struck the shackles from the slave, and agreed to protect him in the exercise of his civil, political, and religious rights, but he was as much a slave as before; he could not give a reason for his ballot, he did not know how to make a contract, and, as for his religious rights, he didn't seem to have any use for them. The State does not confer rights, but it is her highest duty not only to protect a citizen in the exercise of his rights, but also to teach him what his rights are and how to use them; and when the State so teaches the individual that he will take the grandest view of his rights, she will no longer draw fine lines between primary and secondary education, but will give him the best education that America or Germany can bestow.

But I pass from the discussion of the principle of universal education, as connected with universal individual development, to the discussion of the *application* of this principle to a free system of universal individual education in America, extending from the primary school to the college.

As the Puritan stood upon the Atlantic shore he looked to the East and to the West, then down at himself, and came to the not surprising nor uncommon conclusion that, before all others, he was of chief interest to the Creator. He believed in individual liberty for himself, but a century passed before he discovered that, if he would maintain his own liberty, he must claim and enforce the same right for others. His mind was hampered by the limitations which tyrannical institutions had placed upon it. The Puritan was in advance of his age, but in his conception of liberty, as compared with the representative man of the nineteenth century, he was inferior. We need not wonder, then, that the so-called free grammar schools of Boston were in no sense the public schools of to-day; and, as individual liberty pushed its way slowly to the front and demanded some system of universal education, we need not wonder that that system was made elementary. Secondary and superior education were fostered by the States, but not as an integral part of the free-school system. Persia educated to enslave; puritan New England to make free. In the nineteenth century Germany and America educate to perpetuate freedom, and the freedom of the masses is not assured until poverty can stand by the side of wealth and aristocracy, not only in the primary school, but in the college as well. But New England now realizes the fallacy of those limitations which the puritan spirit, tinged with European ideas, placed upon her educational system, and, in breaking through those limitations, she has encountered all the opposition with which the traditions of centuries can oppress individual liberty. In the last twenty five years New England has made an heroic attempt to furnish the masses a free system of secondary education, but, with one or two exceptions, the free high school has not received the cordial support of the New England States; the obstructionists of free secondary and superior education are respectable, and have the traditions of the ages in their favor. THE JOURNAL OF EDUCATION for November 17, 1881, contains the following:

> "In several of the largest cities and many of the smaller cities in our country the people are waking up to the unpleasant conviction that their public schools are not paying for the large amount of money and expectation invested in them. The causes for this disappointment are various. In several of our great eastern cities the public school has grown up without the sympathy of the leading class, and in face of the pitiless opposition of more than one great religious sect. Hence the inevitable collision between the respectable obstructionists and the growing demand of the masses of the people."

Why has the free public school system grown up "without the sympathy of the leading class"? The answer is, that the eastern free school system, as a whole, has never challenged the respect of the "leading class" by a free system of secondary and superior education; even elementary schools are inefficient when not supplemented by high schools and colleges.

But the public school of New England has encountered opposition from a source from which it was its right to expect very different treatment. I refer to those endowed schools which have been the pride of the New England States, and which were, for a long time, the inspiration of the free school; but, as they have gained prestige, they have withdrawn their sympathy from the public schools of the States which nourished them, and have assumed a patronizing attitude. Does this seem to be mere assertion? Harvard University will serve for illustration. In the report of the Univeriity, embodied in U. S. Commissioners' Report for 1879, is the following: "Of late years the endowed school and academies have been slowly gaining upon the public schools in the number of candidates presented and in the quality of the training given to their pupils."

In EDUCATION for November, 1881, a commentator upon the above adds: "The fact that the list of private schools and academies represented by the young men who entered Harvard from 1871 to 1879, inclusive, comprises the very best in the country, gives peculiar significance to this implied condemnation of free-school training. It is time to cease theorizing about secondary instruction in our country; the record before us, incomplete, unsystematic as it is, affords conclusive evidence that those who would abolish or cripple public high schools would place us below the intellectual plane to which all other nations are aspiring." Again, in 1873, President Eliot of Harvard, and Dr. McCosh of Princeton, opposed the endowment, by government, of schools for superior instruction; and held that the government should confine itself to promoting elementary education; in the same year Prof. Atkinson replied in language which still rings in our ears: "What," said he, "is the government domain but the property of the people, and to what higher use can the people put it than to promote the higher as well as the lower education of the people? We have in this country no aristocracy of education,—not one education, as in the old country, for the 'masses' and another and higher one for the privileged minority. The republican principle is, the best education for all,—the best and highest education for the 'masses.' That is the only principle on which republican institutions can be founded." Harvard, who in her earlier and in her riper years was directly aided by the State,—Harvard, whose duty it was to foster the education of the whole people, now that she no longer needs the State's fostering care, has, like other great corporations, cut loose from the power that made her, and turning to Massachusetts declares that government has no right to endow institutions for superior instruction, and condescendingly says: "By the grace and tolerance of Harvard, and by reason of our past relation, we permit your poorly-prepared and ill-conditioned students of the free schools to enter the University." Had Massachusetts kept her grip upon Harvard, as a State institution, she would not now encounter this humiliation, and her free secondary instruction, instead of being "incomplete" and "unsystematic," would have been a firm and sympathetic link between her elementary school and the university. It is certain that the secondary and superior instruction of Michigan cannot *patronize* the State; shall ever the bitter cup be placed to the lips of other States?

I now invite attention to a growing evil which cannot exist in the same atmosphere with free secondary and superior instruction. I refer to the differentiation of New England society. Why go to Europe for examples of class rule when we have them nearer home? Why wait until history shall crystallize truth before we realize our danger? Fifty years ago the words "day-laborer," "working-men," "lower classes," were almost unknown to American literature; to-day these words are not only a recognized part of our language, but are pronounced with an *accent.* These words, in the mouths of corporations and the would-be "higher class," are synonyms of inferiority. It is a sad truth that the Eastern States contain a large and growing class which believes in an inferior elementary education for the many, and in a superior education for the few; and this same class is looking eagerly for the time when, as it fondly imagines, this country will be a great flower-pot with itself the central flower, and the whole social scale beneath, dirt in which itself may grow and put forth blossoms. This class had its origin in the New England States; its birth and growth were made possible by the absence of free superior, and until recently free secondary, education; and that same class is held in check only because New England has in the field an army of trained public school teachers who have not only broadened and deepened elementary instruction, but who have also battered down much opposition to free high schools. Does it occur to the reader that my imagination may deceive me? I refer him to the records. THE JOURNAL OF EDUCATION of Oct. 6, 1881, in an article entitled "The Peril of New England," says: "Like the Englishman, the Yankee has always in him a lurking devil of despotism and pride, and he finds it difficult to deal justly in all ways with people dependent upon or beneath him. While we do believe that, on the whole, the civilization of New England deserves much that is said of it in comparison to other portions of this country, it would be folly to deny the fearful perils that threaten her near future unless met and disposed of with the most vigorous wisdom and Christian forbearance." In another portion of the article, in speaking of the isolation of children for the purpose of exclusive training, as recommended by Catholic bishops, THE JOURNAL says: "In this they (meaning the bishops) coincide with the views of a class of the more exclusive native sort, who hold that the laboring multitude should be content with a very moderate education, largely industrial, that shall fit them for a well-defined inferior position in life, and not disturb them with discontent and envy of their superiors." Again, "Of one thing professor and priest may be alike assured,—that every Yankee boy and girl, of native descent, intends to get the best of everything somewhere. If the time comes when a superior, exclusive class rules in New England, the whole body of native youth will turn their backs upon Yankee-land and push for regions where manhood and womanhood still claim their rights." To what regions will they turn, if not to the West? and to what portions of the West, unless to those States which, by the perfection of the free-school system, shall guarantee protection from caste rule? In the language of W. A. Mowry, "It is necessary to abolish caste. . . . . Let the door of the schoolhouse, the 'brain factory,' be open to all the children, and the child once started on the career of learning, let him not find those doors ever closed against him till, if he so elects, he shall have completed not merely the course of study in the common English branches, but in the English high school, the scientific school, or the college. Thus will be brought about the time when will be realized on earth the two great principles alike of the highest human philosophy and of our holy religion,—the *common fatherhood of God* and the *equal brotherhood of man*."

I now turn from the discussion of class-rule to the consideration of another question which is agitating the East, and which is not foreign to the West. I refer to the *manner* of imparting moral instruction in our public schools. If you have read the Superintendent's reportof Denver's public schools for 1881, I fear my views will prove of little interest. But we all agree that the methods of imparting moral instruction ought to be discussed until our schools reach a higher degree of moral excellence; and yet it will temper criticism if we remember that no scheme of education has been devised that has so improved the morals of the masses, rich and poor, as the public schools. It is my conviction that the schools are not so much in danger from increasing immorality, as from honest but injudicious people who persist in administering nostrums to cure the evil. There are two methods of imparting moral instruction, the direct and the indirect. The ritualists, both Catholic and Protestant, encouraged by a growing class among other denominations, advocate the direct method of moral instruction; and yet it does not appear that, if opportunity were given, they could agree upon a moral code for the public schools. To prod your opponent with a sharp stick through a crevice in a fence is much safer than though he were on the same side with yourself; so it is safer for us to prod the Roman Catholic than though he were upon the Protestant side of the fence. But I protest against this unfairness. Opposition to the free-school system by the Roman Catholic is no worse than opposition by the Protestant, and so far as Protestant and Catholic travel the same road they should be classed together. Criticism upon the public schools by more than one powerful denomination challenges criticism upon the same plane, and a chapter from their own experience may make them more charitable, and possibly more modest. In Italy, Germany, and Protestant England, moral and religious precepts have thundered from the teacher's desk with the same regularity as ocean's tide beats upon the shore; but in every one of those countries the State has been obliged to interfere and wrest the school system from the power of the church. This historical fact is no reflection upon the church or Christianity, but it does reflect upon the *method*,—it does go to show that "the formal inculcation of moral truth" is not the best way to weave character out of that complex being, a child. The hitting of a boy with a moral cudgel affects him in the same way as striking him with any other club,—in either case it confuses his ideas. It is curious to notice some of the phases through which portions of the church have passed in connection with public education.

In France, in 1883, the Roman church played the strange role of the zealous advocate of freedom of instruction. In England the Episcopalian has monopolized public instruction, and the Methodist is fighting it because it is too sectarian; in America the Catholic has not been noted for his zeal in advocating free instruction, and the Episcopalian has not been so indiscreet as to commit himself on the side of the public school, and here we find the Methodist a warm advocate of public instruction. But in all these cases we shall find them, as is their right, moving in the direction of what they deem to be their own interests. In view of these facts, when the morals of the public schools are criticized by the organ of any great denomination, the friends of public instruction have a right to ask what *motive* underlies the criticism, and, if that motive is found to be more selfish than moral, the facts of history and the voices of the ages should be marshalled against it. In some of the Eastern States the Roman church demands a division of the school fund. Are you sure that the Roman church has no Protestant sympathizers? are you sure that if she should have hopes of obtaining her demand that other powerful denominations would not favor the scheme, as they have already done in the Netherlands?

I make the exact quotation from the history of education in the Netherlands: "The Catholics, however, left their liberal allies, and, at present, are united with the orthodox Protestants and Conservatives in an attempt to divide the school-fund, a scheme which is opposed by the Liberals only. This question of denominational schools has since formed the chief issue at the general election. In the election of 1875, for members of the second chamber, the Liberals obtained a majority of two over the united opposition." But happily there is a more cheerful view than this. The arena of the public school furnishes a grand battle-ground for those who wish to contend for moral as well as mental growth, and it is the only arena where all classes and denominations can meet in friendly rivalry and inculcate moral principles without the clash of dogma and the scars of war. But how shall these great denominations meet in that arena? Shall they come to impart direct moral and religious instruction, and possibly to teach special tenets of their own? God grant it not! But let their presence be felt even as the presence of the Great Teacher is felt among themselves,—known, but not seen; present in the spirit, but absent in the flesh. Let them see to it that no teacher, Catholic or Protestant, who is not morally clean, stand at the teacher's desk; that suitable reading from the best authors is placed within the reach of every child; let them guard every avenue to vice, and open wide the doors of virtue; let them take a broad catholic view of the whole public-school question. But, if a system of backbiting and coldness once grows up between the free school and the church, both will suffer much, and, in this age of independent action, it is impossible to foretell which will suffer most.

After two and a half centuries of elementary instruction have passed, after the courts of many of the States and the Congress of the United States have admitted the right of taxation to support secondary and superior instruction, I will not insult your intelligence by discussing this question; but I will strengthen your convictions by a few sentences from the lips of those men who have discussed this question in Europe, and in the eastern portion of the United States. "I will thank any person," says Everett, "to show why it is expedient and beneficial in a community to make public provision for teaching the elements of learning, and not expedient nor beneficial to make similar provision to aid the learner's progress toward the mastery of the most difficult branches of science and the choicest refinements of literature." Says Huxley, "No system of public education is worthy the name of National unless it creates a great educational ladder with one end in the gutter and the other in the University." Francis Adams says, "Elementary education flourishes most when the provision for higher education is most complete. If the elementary schools of Germany are the best in the world it is owing, in a great measure, to the fact that the higher schools are accessible to all classes. In England, not only have the aims of the elementary schools been educationally low and narrow, but an impassible barrier has separated the people's schools from the higher schools of the country. In the United States the common schools have always produced the best results where the means of higher education have been the most plentiful." The words of Washington are, "In proportion as the structure of a government gives force to public opinion it is essential that public opinion should be enlightened."

Why is it that I have dwelt so long upon the shortcomings of New England? Let no one suppose I have been indulging an acrimonious spirit. She is the mirror in which we see reflected the civilization of two and one-half centuries. It is our privilege to profit by the errors as well as by the excellencies of New England; she warns the West not to repeat the mistake of the Puritan by placing limitations upon its free-school system, and the West has profited by the warning. Not until we turn our steps westward from the Atlantic coast do we realize the ideal free school; only in our western land does the State support free primary, secondary, and superior instruction; only there does she look upon the rich and the poor with impartial eye; only there does she dignify the individual with the thought that he is personally interested in a grand scheme for the development of the human race; only there does the State recognize by her practice that universal individual development, which is only another term for individual freedom, is inseparable from, and coincident with, universal individual education, and that the education of the masses must be accomplished, if at all, by the State providing in a civil, rather than in an ecclesiastical, capacity a free system of universal education extending from the primary school to the college. Is there not enough in the thought of universal emancipation to awaken our enthusiasm? Do we realize that we are writing the educational history of America; and that, as we write, so shall it read a century hence; and as it shall read, so it shall stand as a testimony for or against us? If we cramp the model we can rear no stately structure. ut Bit is our proud privilege so to build that caste rule can never obtain a footing in these States; let us build a free system of education with its foundation at the base of our lowest foot-hills, and let us extend it upward in an unbroken column until it shall match the highest mountain-peaks. Let us reply to all criticisms upon this grand system with patience, with calmness, and with hope; let us not express anger nor surprise when people ask what education is for, not even though grave State senators rise in their places and inquire somewhat roughly, but in the presence of an applauding audience, "In the name of God, what do they study at the State University that is of any sort of value?" Let the experience of the ages, embodied in the words of man, answer.

Hon. O. P. Fitzgerald, in the report of California for 1871, speaking of the real value of the University, says:

> "The State, before renewing its endowments; the National Government, before repeating its grant; the men of wealth, before founding new professorships; and the fathers, before sending us their boys, will often ask, 'What for'? Let us have our answer ready. Let us trace the influences which have proceeded from Athens, where Socrates and Plato taught,—teachers whose words still nurture our

statesmen and theologians; from Bologna and Paris, where students dwelt by thousands; from Oxford and Cambridge, where so many of the foremost teachers of Anglican literature, politics, and science were fitted for their career; from the seats of learning in Germany, now surpassing in number of teachers and students the universities of every other State; from the colleges of New England and the Atlantic sea-board; let us study such examples, and say with courage and hope that the University shall be a place where all the experience of past generations, so far as it is of record, and all that is known of the laws of nature, shall be at command for the benefit of this generation and those who come after us; that here shall be heard the voice of the wisest thinkers, and here shall be seen the examples of the most diligent students in every department of science. Let us say that here high-minded youth, while they train their powers as in a gymnasium, may also fit themselves with armor for the battle of life, and may study examples of noble activity. Let us see to it that here are brought together the books of every nation, and those who can read them; collections from the kingdoms of Nature, and those who can interpret them; the instruments of research and analysis, and those who can employ them; and let us be sure that the larger the capital we thus invest, the greater will be the dividend.

"What is the University for? It is to fit young men for high and noble careers, satisfactory to themselves and useful to mankind; it is to bring before the society of to-day the failures and successes of societies in the past; it is to discover and make known how the forces of nature may be subservient to mankind; it is to hand down to the generations which come after us the torch of experience by which we have been enlightened.

"It is wisdom which the University promotes; wisdom for individuals and nations, for this life and the future; a power to distinguish the useless, the false, and the fragile from the good, the true, and the lasting. There was a wise man of olden time who figured its value as well as any of the writers of to day when he said: 'Happy is the man that findeth wisdom, and the man that getteth understanding, for the merchandise of it is better than the merchandise of silver, and the gain thereof than fine gold'; and his estimate of post-graduate instruction deserves our assent. 'Give instruction to a wise man and he will get wiser; teach a just man and he will increase in learning.'"

But overshadowing this reply in the mystery of eternity are three unknown quantities, whose values can be determined only by the Infinite,—fraternity, humanity, liberty.

HOW DOES COLLEGE LIFE AFFECT THE HEALTH OF WOMEN?

BY L. H. MARVEL, A.M.

Even as late as the beginning of the present century the prevailing belief respecting the health and longevity of different classes of people was favorable to the farmers and workingmen, and adverse to those engaged in the professions. The farmer was pictured as hale and hearty, the workingman as muscular and brawny; the student and professional man as pale, weak, nerveless, and oftentimes effeminate. But within comparatively few years statistics have been compiled which show the reverse to be true.

Foremost among the athletes of the country have been found those college students who are interested in boating, the ball-field, and in various other sports and amusements which demand health and strength as well as skill. The record of our late civil war shows that the professional men far surpassed other classes in strength and endurance; and even the cold, close calculations of the actuaries of life insurance companies indicate that professional people exhibit the greatest longevity.

The mass of college graduates are engaged in the professions. It is clear that the result of their college training has been to establish a stronger physique and develop a higher type of manhood than the average. For all these statements the data may be readily obtained to establish the proofs.

But the colleges for women are now passing through an ordeal similar to that which the colleges for men have successfully passed. While conceding that the minds of women may be trained to do equally as good work as men, the prevalent objection to the higher education of women is that the knowledge is obtained at the expense of health and strength. A few cases are often cited and the judgment *ex uno disce omnes* pronounced as though the data were sufficient to warrant an unalterable decision. Believing that a careful study of facts might result in proof that a mistake as glaring as that which had been made respecting the colleges of men still prevails respecting the higher education of women, correspondence with leading colleges and higher schools was commenced.

Without going too closely into details, the following questions were asked from the authorities of each institution to whom letters were addressed:

First: How does the health of young ladies who enter the institution compare with the health of other young ladies of same age and similar social position?

Second: How does the health of those who graduate compare with the health of the same person on entering college?

Third: In those institutions where both sexes are admitted, is there any marked distinction in the effects of college-life upon men and women?

In the belief that replies to these questions from institutions in various parts of the country will be of value in determining the question under consideration, and will indicate more nearly than any other, facts from which can be adduced the real effect of attendance at colleges and advanced schools upon the physical development of students, extracts from the replies of several of the school officials are presented for consideration. In nearly all cases the social life of the young ladies was held responsible for much of the lack of health and vigor which might be noticeble. Those young ladies, either in school or out of school, who devote a large portion of their time to social pleasures are worn out by the excitement of parties and balls, and exhausted on account of late hours and insufficient rest.

Again, some over-ambitious students who attempt to enter advanced courses, or do two years' work in one, may be expected to suffer the penalty of overwork. Besides these classes, those who enter college determined to do the regular work of the curriculum without allowing external cares, pleasures, or duties to engross their time and attention, are to be considered as the typical students. If it shall be found that such students are injured and enfeebled as a result of their college life we may legitimately conclude that its effect is detrimental to the physical development of the average woman. If, on the other hand, it shall be shown that the women in college and those who graduate are stronger, healthier, more robust, and longer lived than women in other walks of life, the theory that the higher education tends to lower the physical standard of womanhood must be abandoned.

Without farther introduction, testimony from various schools and colleges is offered. From the statements of facts presented each may draw for himself conclusions concerning the physical status of college-bred women.

VASSAR COLLEGE, POUGHKEEPSIE, N. Y., Nov. 11, 1882.

DEAR SIR:—I doubt if we have any statistics in reference to the points fo your inquiry. No medical or physical examination of students is required on their entrance. I suppose our students coming here from various schools, at the age of fifteen or sixteen, are about like other girls of the same age in the same schools and in the same domestic and social relations. At graduations, when girls are at least four years older, so as I have observed, they are generally in better health than when they enter. But there are no statistics on which to base a certain conclusion. In this college they are under the surveillance of a resident physician, their hours are regular, their work is regulated by their strength, and they are not overworked. Of course there are cases where the student gives out and leaves. She may be a chronic invalid bringing her ailment, or the germ of it, when she comes. But in any community where there are three hundred girls, many of them still growing, there is more or less invalidism. I think there is less in our little community than with any other three hundred in other places and walks of life. Our resident physician, who has been here but a year, is about to make some records, in connection with her examination of students who are to take gymnastics, which may have some value. But I doubt if any satisfactory inferences could be drawn from the records in our physician's office in regard to the number of patients and their ailments for any given year, or any number of years. If these could be, I do not know when the facts could be obtained for a comparative estimate in regard to girls of the same social position who do not go to college. If you can give me any specific inquiries for which we have facts to answer, I shall be happy to furnish them. Yours very truly,

S. L. CALDWELL.

SMITH COLLEGE, NORTHAMPTON, MASS., Nov. 10, 1882.

DEAR SIR:—President Seelye desires me to say, in answer to your questions of the 6th inst., that the health of our students upon entering college is a little lower than that of the average farm-girl. But as regards the condition of other young women of the same age and of similar social position who are prepared for college, we have no means of judging. The statistics taken for the year ending June, 1881, show that, out of two hundred and fifty students, three left college on account of sickness apparently contracted while here. We have every reason to believe that, owing to sufficient sleep, proper food, and regular exercise, the physical condition of the students materially improves during their residence in college.

Yours truly,

RACHEL C. CLARK, President's Private Secretary.

From the report we learn that in addition to lectures on Physiology and Hygiene there are regular exercises in light gymnastics, in a gymnasium provided for the purpose. These exercises are accompanied by music, and are under the charge of a competent teacher. They are designed to bring the muscles into symmetrical action by agreeable methods, and they aim to secure not only health but also graceful carriage and well-formed bodies.

The number and and arrangement of studies, and the mode of life, are carefully adapted to the demands of an enlightened physiology.

In the construction of the college buildings great care has been taken to avoid numerous staircases, and to secure the best arrangements for light, heat, and ventilation.

SALEM, MASS., Nov. 11, 1882.

DEAR SIR:—It is not easy to generalize safely in regard to the effects of study upon young women. Some of my own pupils, at the close of their course of study in the Normal School, have assured me that their health was better than it was when they entered the school. Others have seemed to become more or less exhausted in strength. In the most of the latter cases the exhaustion has, I feel assured, been caused more by anxiety than by the work done or required. This anxiety is experienced chiefly by young women who strongly desire to do well, but whose scholarship places them near the dividing line between those who may and those who may not graduate. There must, of course, be some standard of scholarship that shall be reached as a pre-requisite for graduation. There will always be more or less doubtful cases in each class. I see no way of preventing anxiety on the part of the doubtful ones. Young women are, as a rule, sensitive, and in some cases the prospect or possibility of a failure undoubtedly has an injurious effect on the health. After much observation, experirience, and thought, I have come to the conclusion that, *upon the average*, young women cannot safely perform, for a considerable time, as much mental labor as young men can; and not from inferior mental ability, but from inferior physical strength. I believe in the "higher education of women," but I seriously question the wisdom of requiring them to accomplish the same kind and amount of work in the same time and the same way as is expected of young men. Yours truly,

D. B. HAGAR, Prin.

WELLESLEY COLLEGE, WELLESLEY, MASS., Nov. 9, 1882.

DEAR SIR:—The physical condition of young ladies on entering college, compares favorably with that of other young ladies of the same age and social position. Although the college, in the correspondence with applicants for admission, advises them not to be in haste to enter, to prepare slowly and thoroughly, and to give the two months of summer vacation before college opens to rest and recreation, there is occasionally an instance of a student who comes suffering from the consequences of overwork. As a rule such students gain in health after a few weeks of regular college life. Wellesley has four hundred and seventy students. Of this number, two hundred and twenty are enjoying their first year in college. Three new students have been sent home on account of physical incapacity. These were not members of the freshman class, entering after a careful preparation, by diligent study, of Greek, Latin, and Mathematics,—they were students who entered to take special studies. Their illness could not be attributed in any one of these cases to overwork.

In reply to the second question,—How does the physical condition of graduates compare with their condition on entering college?—the physician states that there is very often improvement in health during the college course, and the state of health on graduating will compare favorably with the same on entering college. One hundred and seven girls have been graduated from Wellesley. Of this number about one-half are doing acceptable work as teachers, and furnishing convincing proof that study is not an enemy to health. Not one of the graduates is known to the college to be an invalid. The healthy condition of the students may be attributed in some measure to the fact that they feel that they are accomplishing good work, and are interested and happy in their daily tasks.

A. M. McCoy, Sec'y.

[*Extract from the "Wellesley College Calendar."*]

"For many years the charge has been repeated, in public and in private, that health is destroyed by hard study. It is the favorite argument of those who oppose the higher education of women. This charge is not just. The truth is, that hard study, properly directed and regulated, promotes physical health. Every experienced teacher will confirm this statement. But the unjust prejudice against the higher education of women is perpetuated because the consequences of violating the laws of nature, from earliest childhood, are charged upon study, while the real causes are disregarded and allowed to continue their pernicious work. When the thoughtful women of our country are united in observing, protesting against, and reforming the fatal causes which do indeed destroy health, this calumny, that woman's mind and woman's body are too frail to bear the pursuit of knowledge, will perish with other forgotten prejudices."

Mt. Holyoke Seminary, at South Hadley Falls, has been established forty-five years. The present membership is from two hundred and seventy-five to three hundred pupils. The course of study is four years. Pupils who enter the school are generally graduates of high schools, or have received equivalent preliminary training. The report from this institution is that the health of girls who enter the school is as good or better than that of other young ladies of similar age and social standing. But during their connection with this institution the resident physician marks a noticeable increase in weight and strength.

The following statistics, including a period of thirty years, show the comparative longevity of graduates from several institutions, including Mt. Holyoke Seminary:

	Graduated.	*Deceased.*	*Rate per ct.*
Mount Holyoke Seminary,	1,213	136	10.39
Amherst College,	1,199	*135	11.26
Bowdoin,	1,012	*120	11.85
Brown,	972	120	12.34
Dartmouth,	1,639	276	16.83
Harvard,	2,326	*208	11.52
Williams,	1,215	123	10.12
Yale,	2,883	387	13.42

* Exclusive of war mortality.

OBERLIN COLLEGE, OBERLIN, OHIO, Nov. 14, 1882.

DEAR SIR:—I am not prepared to furnish the statistics in regard to the health of female students for which you ask. Some time since a committee of our faculty was appointed to gather these facts, but they have not yet reported. Our impression has been, from a general observation of the facts, that our young women endure the strain of a course of study as well as the young men; *i. e.*, where they have had the same or equal preparation. In the case of young women who come into the advanced literary and philosophical studies of the course, without the full discipline of previous classical study, there are indications of nervous anxiety at times, which is undesirable and unwholesome. Hitherto, our arrangement of courses has brought young women into these advanced classes under this disadvantage. They have held their place in scholarship, but not always in health. My personal opinion is that the apprehension of failure in the class-room takes a stronger hold upon young women than young men. The young women are in general very sensitive about falling behind. When we have the statistics, I can answer more satisfactorily.

Yours very truly,

JAS. H. FAIRCHILD.

[*From "The Coëducation of the Sexes as pursued at Oberlin College."*]

Have young ladies the ability in mental vigor and bodily health to maintain a fair standing in a class with young men? Do they not operate as a check upon the progress of the class, and degrade the standard of scholarship? and do they not break down in health under a pressure which young men can sustain? To this inquiry I answer, where there has been the same preparatory training, we find no difference in ability to maintain themselves in the recitation-room. Nor is there any manifest inability on the part of young women to endure the required labor. A breaking down in health does not appear to be more frequent than with young men. We have not observed a more frequent interruption of study on this account; nor do our statistics show a greater draft upon the vital forces in the case of those who have completed the full college course. Out of eighty-four young ladies who have graduated since 1841, seven have died,—a proportion of one in twelve. Of three hundred and sixty-eight young men who have graduated since that date, thirty-four are dead, or a little more than one in eleven. Of these thirty four young men, six fell in the war; leaving those out, the proportion of deaths still remains one to thirteen. Taking the whole number of gentlemen graduates, omitting the Theological Department, we find the proportion of deaths one to nine and a-half; of ladies, one to twelve; and this in spite of the lower expectation of life for women, as indicated in life-insurance tables. The field is, of course, too narrow for perfectly conclusive results; but there is no occasion for special apprehension of failure of health to ladies from study."

BOSTON UNIVERSITY.

As regards instances of the physical condition of graduates during their college course, I have known many more to improve than I have to deteriorate; and in reply to your question, whether there is a marked difference noted in the effect of study upon the minds and bodies of female students, I reply, there is no difference.

W. F. WARREN.

PRESIDENT'S ROOMS, CORNELL UNIVERSITY,
ITHACA, N. Y., NOV. 11, '82.

I am directed by President White to say that no statistics regarding the physical condition of young ladies upon entering college, and after graduation, have been kept; that he has a very strong impression that the experience at the Western institutions where ladies are admitted to advanced courses of study, as well as in this institution, is favorable to the higher education of women from the physiological point of view. Pains have always been taken in this institution to impress upon young women the primary importance of maintaining good physical health; and to this end, lectures upon physiology and hygiene are delivered to them,—and a gymnasium is set apart for their use. Mr. White can only say that the health of graduates of Cornell University seems to compare very favorably with that of other women of similar age. His attention has certainly never been called to any deterioration in health in consequence of advanced study on the part of women; and he has always taken pains to tell young lady students that the maintenance of good physical health is more important to them than any amount of intellectual discipline or culture.

I remain very truly yours,
GEO. L. BURR, Private Sec'y.

STATE NORMAL SCHOOL, BRIDGEWATER, MASS., NOV. 7, 1882.

DEAR SIR: — In answer to your inquiry concerning the effect of study upon the physical health of our young lady students, I submit the following reply. Our lady students generally improve in health during their course of study. Their habits of living are more regular with us than at home, which proves beneficial to their health of body as well as mind. I believe the physical conditions of the young ladies entering this school is quite as good as that of other young ladies of the same age and similar social position. I do not perceive any noticeable difference in the effect of study and exercise upon the minds and bodies of female students as compared with male students. Yours truly,

A. G. Boyden.

St. Lawrence University, Canton, N. J., Oct. 28, 1882.

Dear Sir: — Our College has been in operation for seventeen years. The proportion of male and female students has been about as two to one, —that is, one-third ladies.

1. Their mental and physical condition when they entered was about the same as other young ladies of the same age and social position, though probably in most cases a little better. Their health had generally been good, and their mental training not very systematic or extensive. On entering college they are put down to hard and systematic work, and kept so all through the four years' course.

2. Their health has generally improved during their college course. There have been exceptions, but these have been few. Systematic study has tended to improve their health. We have had but one death among the lady students while they were connected with the college, and very little sickness. At the close of their college course they have appeared healthy and robust, and have entered upon their work of teaching or other occupations requiring mental exertion, with every prospect of holding out well, also, as to scholarship and in the higher branches,—as Latin, Greek, political economy, the calculus, mental and moral philosophy,—have ranked as high as the gentlemen, and in some cases higher.

3. I cannot say that there is any great difference in the effect of study and exercise upon the male and female students. Neither seem to be injured at all by continuous study. Both are made stronger in body and mind. I may also add that the mental occupations upon which our graduates enter after leaving our college tend to increase the strength and activity of body and mind of the lady students.

J. S. Lee, Professor.

Ann Arbor, Michigan, Oct. 26, 1882.

1. The comparison is strongly in favor of the ladies who enter the University.

2. The health of the graduates is, as a rule, I think, better even than when they entered. Some cases, however, are exceptions.

3. I do *not* note any marked difference in the effect of study and exercise upon the minds and bodies of female students compared with male students.

Chas. H. Stowell, M.D.

ANN ARBOR, MICHIGAN, OCT. 23, 1882.

Replies to questions on the accompanying paper. The replies relate to the University of Michigan.

1. They are rather stronger, both physically and mentally.

2. In most cases it is quite as good at leaving as at entering. A few have injured the health by over-application or disregard of hygiene, but the ratio is not greater among women than among the men.

3. There is absolutely no difference in the effect of study and exercise, either mentally or bodily, in the coëducation of the male and female students.

MARK W. HARRINGTON, A. M., Prof. Astronomy.

UNIVERSITY OF MICHIGAN, ANN ARBOR, OCT. 19, 1882.

Women have been here since 1870, and have done every kind of work successfully and without injury to character or health.

Yours very truly,

JAMES B. ANGELL, President.

MADISON, WISCONSIN, NOV. 10, 1882.

DEAR SIR: — I send a report on coëducation. It is an accepted fact with us, which no one ventures any longer to criticise, so manifold are its advantages. The young women maintain an equal rank in scholarship with ease.

J. BASCOM.

The following selections from Prof. Bascom's report are especially pertinent:

"Contrary to the opinion of the visitors, the young women do their work with less, rather than with greater, labor than the young men, and certainly do not fall below them in any respect as scholars. We also believe this labor to be done by them with perfect safety to health; nay, with advantage to health, if ordinary prudence is exercised. The young women, whose health was primarily the ground of criticism, have improved in strength rather than deteriorated, since they have been with us, though they burdened themselves with extra work which we do not counsel.

"We confess to some surprise that so many of the medical profession bring forward for the first time in connection with coëducation, a function familiar from the dawn of human life, as if it had the force of a fresh discovery in putting down this form of progress, when, in fact, it has no more to do with coëducation than with separate education, can as well be provided for in the one form of instruction as in the other, and bears with tenfold force against the labors of women as operatives, clerks, teachers, housekeepers, in which callings continuous hard work has been allowed to pass utterly unchallenged.

"Though my conviction has been, previous to this report, that the health of the young women, as a whole, was *better* than that of the young men, and that there were striking instances of graduation with robust strength, I am striving to test this opinion by facts, so far with the following results. All excuses for ill-health are given by me. The exact number of students in our collegiate and dependent courses is 357. Of this number 93 are young women,— a trifle more than one-quarter. During the past eight weeks, the most trying weeks in the year for students, there have been 155 days of absence from ill-health on the part of young men, and 18 on the part of young women. The young women should have lost, according to their numbers, 54 days, or three times as many as they have actually lost. The students were not aware that any such registration was being made. It may be felt that the young men are less conscientious in pleading ill-health than the young women, and this is doubtless true ; but I sharply question a young man, and rarely ask any questions of a young woman. I explain the facts in this way. The young men are not accustomed to confinement, and though sun-browned and apparently robust, they do not endure the violent transition as well as women. Study is more congenial to the habits of young women, and the visiting committee are certainly mistaken in supposing that they have to work harder in accomplishing their tasks. *The reverse is true.* In addition to the above bill of ill-health against the young men, a corresponding large number of them have been compelled, from the same cause, to leave the University altogether.

" A second showing of the registration, which I had not contemplated, but one very interesting, is this ; the absences of the young women are almost exclusively in the lower classes. Of the eighteen, two are in the Sub-Freshman, fourteen in the Freshman, one in the Sophomore, one in the Junior, and none in the Senior. The absences of the young men are evenly distributed, on the other hand, through the entire course. The young women do not, then, seem to deteriorate with us in health, but *quite the opposite.* I do not belong to the number of those who set lightly by health,— I would not sacrifice any measure of it for scholarship ; but it has long seemed to me plain that a young woman who withdraws herself from society and gives herself judiciously to a college course is far *better* circumstanced in reference to health than the great majority of her sex."

The testimony of all these authorities is uniformly to the effect that young lady students who enter college well prepared, and who devote their full time and strength to legitimate college work only, leave college with both bodies and minds improved by their four years' connection with the institution. It is noticeable that those who are familiar with the effect of student-life upon both (the presidents of mixed colleges) express themselves more emphatically upon this point than those who have control of colleges for women only. It is evident that the latter fear to overstate the case, while the former, having comparative statistics to guide their judgment, and knowing the effect of student-life upon the health of men, speak with greater confidence.

The record of comparative mortality prepared by the faculty at Mt. Holyoke Seminary, and the record of absence on account of sickness at the University of Wisconsin, are illustrations in which carefully prepared statistics are presented. But the mature judgment of college officers from all sections of the country, while not expressed in figures and percentages, seems a still higher criterion upon which to establish a final correct judgment; and this opinion may be concentrated in the following statement:

College life, so far from being a hindrance to the physical development of women, has resulted in a stronger physique and more perfect womanhood, except in cases where the student is overburdened by attempting to do more than the curriculum requires and the faculty approves, or when strength has been exhausted by the demands of society.

On the other hand, objections generally come from parties who have no experimental knowledge upon the subject, and who form their judgment either from a few isolated cases which have come under their personal observation, or who assume that certain difficulties exist and then endeavor to invent a cause for them. All the facts, however, demonstrate that their position is untenable. From the preceding testimony of unimpeachable and most competent authorities, the presidents of women's colleges, it must be conceded that women gain in health and strength during college life.

Even a college education may not eradicate from the system all the evil effects of improper diet, inattention to the laws of health, follies of dress, late hours, and social dissipation. But when all these causes have combined to undermine the constitution and ruin the health of the college student or graduate, the real cause should be assigned and the responsibility placed where it belongs, and not shifted to rest as an incubus upon institutions by no means responsible for the result.

ADDENDA.—In a book recently published, the author diverts attention from the subject of the "higher education" of women to "coëducation," affecting to misunderstand the terms, and assuming that the latter is the more prominent issue, and includes the former. In order to avoid confusion, the subject of this article is "College Education," although it is commonly understood that by "higher education" is meant education in such studies as are pursued in those institutions for the superior instruction of women mentioned in the report of the U. S. Commissioner of Education. It is not a higher education than men receive, as the author pretends to assert, which is meant by the term "higher education," but an education higher than is afforded in the elementary and secondary schools of the cities and towns in this country. This definition will be generally accepted by all educators; and those who oppose "higher education" must take the ground that woman is physically or mentally disqualified to pursue the studies of colleges and professional schools, making the discussion of coëducation an issue entirely distinct and separate.

"*SECULARIZATION OF EDUCATION.*"

BY WILLIAM W. FOLWELL, PRESIDENT OF THE UNIVERSITY OF MINNESOTA, MINNEAPOLIS, MINN.

[ABSTRACT.]

WITHIN the past half-century a system of state universities and schools of science has come into existence. This intrusion into the field of higher education has been viewed by many most worthy citizens with doubt and disfavor. By some these institutions have been denounced as Godless and infidel. This sentiment has been entertained by so many persons that it seems worth while, even at this late day, to face the question, "What right have such schools to exist, and can their work and influence be beneficent?" A glance at the field of discussion reveals the surprising fact that the state-university question is but a small corner of it. The common schools are everywhere public; so are the normal schools and the greater number of professional and technical schools. We have them to account for the prodigious historical fact that education in general has come into the hands of the people. The historical method is the only one appropriate to the elucidation of this fact. How has this thing come about?

It is simply a factor in that great historic movement, the separation of church and state, which forms the marrow of modern history. In the eleventh and twelfth centuries there was no secular power, or science, or schooling. All were under ecclesiastical control. Kings and peers were papal lieutenants. The crusaders set in motion a train of causes which, in the course of six hundred years, separated religion and politics as wide as the poles. The crusades were eye-openers to Europe. The returning devotees carried back fabrics, products, arts, manners. The capture of Constantinople, an incident of the crusades, dispersed over the West a body of learned Greeks, who carried with them the books of the ancient Greeks and Romans, and thus sowed the seed which ripened into the revival of learning. Upon this, it is well known, followed the Reformation. Whatever opinions may be held as to what the causes and the results of the Reformation were, not even the Ultramontanes can deny that its main result has been the exercise of "private judgment" as a fact. It broke the spell of Roman and ecclesiastical domination in Europe. At length Richelieu, priest and cardinal though he was, proclaimed that states must be governed by statesmen.

To this great and universal revolution from a state of things in which ecclesiasticism was supreme in government and society, to another in which it has utterly disappeared from public affairs, a profound modern thinker has given the happy designation of the "Secularization of politics." It is the main object of this paper to show that parallel with the secularization of politics there has been a secularization of education. Over against the separation of church and state stands the correlated fact of the separation of priest and pedagogue.

The university of the thirteenth century is the germ from which have grown all our modern schools; and the university was in its origin secular. The ecclesiastical powers, it is true, afterward captured the universities and harnessed them in their service; but long ago they escaped from this tyranny. It is a mistaken notion that the universities were developed from the cathedral and monastic schools of Charlemagne. A great historian* declares that these new schools so drew from the old that, in spite of the efforts of the popes, the cathedral and monastic schools fell away. Another † declares that "they," the universities, "owe their establishment, not to the favor of popes or of princes but to the necessities of the times, as thousands of students were drawn together by the reputation of some distinguished teacher. Acts of incorporation were not sought for from the pope until a later period, when the younger universities endeavored by such means to rival those which depended upon their own reputation." According to Adam Smith, they borrowed the title of university and their organization from the trades-unions of the Middle Ages. The development of middle schools as feeders of the universities dates from the Reformation; the primary school had to wait for some generations. It was not till the peace of Westphalia, in 1648, that Europe obtained release from the wars incident to the Reformation. Another period of nearly equal length was now to pass before the full appearance of the people's education. In the mean time, modern science and philosophy were developed, a new science of political economy was born, — a science finding in the nature of man, as modified and limited by his surroundings, the causes which elevate and purify society. Germany was first to foster the new movement, to organize her education. Her schools long ago formed an organism protected and operated by public law and wholly passed from ecclesiastical control. Other European nations have since organized their education. In our own country education is completely secularized.

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* **Mosheim.**

† **Hare.**

Even in the denominational college, the ecclesiastic influence is weakened, and the professional teacher has usurped the professional chair. Thus we see over against the separation of church and state, the equal co-ordinate fact of the separation of church and school. This secular position of schools has not been the work of any party of infidels or agnostics. It is not the offspring of a corrupt and decaying Christianity. It is an essential factor in the purest, fairest Christian civilization the world has ever known. It is not destructive in its aims or purposes. It is — it must be — a great providential fact, a movement in the great historic evolution of human history. If, then, education is passing out of the hands of the church, and into those of the state, I put it to those who denounce the movement as Godless the question, "What do you propose to do about it?" Will you stem the rising current with your brooms, or, embarking on the mighty wave, be borne onward with the advance of civilization?

We might here drop the discussion by asking those who dissent to show cause why, after abandoning the whole field of primary education and most of the secondary, they should hold undisputed possession of the higher education. When they gave up the common school they gave up the principle of ecclesiastical schooling. But we inquire whether there may not be elements in public education which, in their nature and relations, justify the fact of its existence.

1. Public education is universal in its scope. The people must educate themselves or not be educated. No sect, no church, nor all the churches and sects combined, is equal to the gigantic labor.

2. Next, economy. The state is not only the most efficient but the most economical of all the co-operative agents of modern times. The principle of the division of labor which renders the grading of schools and the assortment of teachers possible will of its own strength dominate all schools and school systems. This is the reason why the academies of New York and New England are giving way to high schools, and why the academy system has taken no root in the West.

3. The organization of education is possible in a public system. America will follow the example of other civilized nations and organize her schools into a complete and harmonious system, offering to the people a free course of school privileges, beginning in the kindergarten and ending in the university.

4. These schools are best calculated to develop good morals and good character. It is no longer sound orthodox theology to found morality on religion, but to build religion on the bed rock of

morality. The Bible presumes virtue. The public school, assuming the essential goodness of human nature, can and must inculcate sound morality founded on man's nature and developed by experience. It can and ought to instil virtue and condemn and suppress vice. It is an advantage to separate the moral training of the school from the religious teachings of the church and Sunday school. The fact that the school is public is an advantage: publicity purifies society as air and water dissolve and dissipate germs of disease. To live and act under public law is a sobering process. The tricks and deviltries handed down from monastic times and perpetrated in the Christian colleges will not disappear until the law of the land shall be, in college as well as out, the guardian of right and the standard of conduct.

Finally, the church gains by abandoning fields in which she has no longer a call to work. Liberated from a labor once incumbent on her, she may now turn her unincumbered force to her proper work, the evangelization of mankind. The market needs to be purified; but the church will not open a produce exchange. Education needs to be infused with the spirit of the Great Teacher, but the church will not hold the keys of the school-room.

THE FUNCTION OF AN AMERICAN MANUAL TRAINING SCHOOL.

BY PROF. C. M. WOODWARD.

WITH his gentle lance Emerson pricked many a bubble, and, though collapse did not always follow immediately, the wound was always fatal. In 1844, in his essay on New England Reformers, he charged popular education with a want of truth and nature. He complained that an education to *things* was not given. Said he, "We are students of words; we are shut up in schools and colleges and recitation-rooms for ten or fifteen years, and come out at last with a bag of wind, a memory of words, and do not know a thing. We cannot use our hands, or our legs, or our eyes, or our arms." And again, speaking of the exclusive devotion of the schools to Latin, Greek, and mathematics, "which by a wonderful drowsiness of usage" "had been stereotyped education, as the manner of men is," he says, "In a hundred high schools and colleges this warfare against common-sense still goes on. . . . . Is it not absurd that the whole liberal talent of this country should be directed in its best years on studies that lead to nothing?"

This is, perhaps, too severe; but we must admit that Emerson anticipated and greatly aided a reform which has been gathering strength for a whole generation. Hence it is to-day scarcely necessary that I should present arguments in favor of manual education. The great tidal wave of conviction is sweeping over our whole land, and the attitude and aspect of men are greatly changed from what they were even ten years ago. What I said in 1873 in a public address in favor of technical education was held to be rank heresy: I fear it would be regarded as rather commonplace to-day. The progressive spirit of the age has actually penetrated our thick hides, and we are trying to keep step with the universe.

To be sure, we still call ourselves reformers, and we shall continue to battle for the new and the true till our banners are the only ones flying. But the day of surrender is near at hand. One by one the outposts have fallen into our hands, and only a few citadels remain. An armistice has been asked for, and, if we can only arrange satisfactorily the terms of an honorable capitulation, the enemy is willing to march out and join our ranks.

In every community the demands of technical education have been discussed, and in every instance when the old system has been subjected to the tests which good sense applies to business, it has been found wanting.

And yet let me not pass with only words of criticism. Let us recognize the inestimable value of American public education. With all its faults, it is our best inheritance Let us be just, yea, generous, if need be, to the bridge that has brought us over. Let us say, "God speed your work!" to those who are battling for education in States black with illiteracy, and let us commend the splendid work done by earnest men and women on all sides. But the faults —we must not be blind to them. If the old education has been good, we can make the new better.

DEFECTIVE EDUCATION.

Is then, I ask, — is the education we give as broad and round and full as it ought to be? Is the time of tutelage most wisely spent? Do the results we secure justify the means and methods we use? Is the relation between education and morality as close as it should be? In short, do we give the education which fulfils the definition of Pestalozzi, quoted yesterday by Dr. Jeffers? I think to these questions we must seriously answer, no. There is a lack of harmony between the school-house and the busy world that surrounds it. Some have even claimed that we are wrong in supposing that education always diminishes crime. Let us see if there is any truth in their position.

You know how often a life is a failure from defective or faulty education. Too often do we see young people, who might have been educated to eminent usefulness, cast, "unfinished,"

> "Into this breathing world scarce half made up."

I have seen poor lawyers who, under a proper system of training, would have made excellent mechanics, and not a few highly educated, able-bodied men actually begging for the price of a day's board. I recall one man in particular, who was able to speak several languages, but, because no one would employ him as a linguist, he must needs beg, for he knew not how to work. Now when a man's education has been misdirected, and he is thrown upon the world shackled by outgrown theories, bewildered by false lights, and altogether unprepared for the work which perhaps he was born to do, and when in his extremity he resorts to knavery and violence and fraud to secure what he knows not how to get by fair means, those who directed, or should have directed, his education cannot be held blameless.

The moral influence of occupation is very great. A sphere of labor, congenial and absorbing, that fully *occupies* one's thoughts and energies is a strong safeguard of morality. If you would keep men out of mischief, keep them busy with agreeable work or harmless play. The balance of employments is fixed by our state of society and the grade of our civilization. Now, if indiscriminately we educate all our youth away from certain occupations and into certain others, as is very clearly the case at present, some employments will be crowded, and, consequently, degraded ; in others, the choicest positions will be filled by foreigners, and the lowest posts, wherein labor is without dignity, must perforce be filled by those who have neither taste nor fitness for their work. The result is broils, plots, and social disorder.

Thirty years ago an eloquent Frenchman (Frédéric Bastiat) charged the one-sided education of his countrymen with being an actual danger to society. He argued that the "stranded graduates," as he called those who, unable to navigate the rough waters of practical life, had been tossed high and dry on the reefs along the shore, "filled with a sense that the country which had encouraged them to devote their best years to classic studies owed them a living or a means of living, would become the leaders of mobs and officers at the barricades."

MORE LIGHT.

When the shadow of death was drawing over the great Goethe, he uttered his last wish for "more light." We must echo his cry, if we would prepare our American system of education for a more glorious destiny. We treat our children too much as the unskilled gardener treats his plants. He puts them by a window and pours over them a flood of light and life-giving rays. Instinctively they turn out towards the source of their strength. They put forth their leaves and budding promises, and, as we look at them from the outside, we mark their flourishing aspect and rejoice. But, if we look at the other side, we shall find them neglected, deficient, and deformed. What they want is more light, — light on the other side. Were the sun always in the east, our trees would all grow like those on the edge of the forest, one-sided.

So in education, we must open new windows, or, rather, we must level with the ground all artificial barriers, and let every luminous characteristic of modern life shine in upon our school-rooms. We must pay less heed to what the world was two or three hundred years ago, and regard with greater respect what the world is to-day. Before we devote ourselves exclusively to the arts of expression, we must cultivate all the faculties and encourage the growth of thoughts worthy of expression.

THE ARTS OF EXPRESSION.

Dr. Youmans recently said (*Popular Science Monthly*, May, 1882), "The human mind is no longer to be cultivated merely by the forms or arts of expression. The husks and shells of expression have had sufficient attention : we have now to deal with the living kernel of truth. . . . Under the old ideal of culture, a man may still be grossly ignorant of the things most interesting and now most important to know. . . . Modern knowledge is the highest and most perfected form of knowledge; and it is no longer possible to maintain that it is not also the best knowledge for that cultivation of mind and character which is the proper, *i. e*, the highest object of education."

I desire, for a moment, to direct your attention to the arts of expression. Next in rank to the ability to think deeply and clearly is the power of giving clear and full expression to our thoughts. This last can be done in various ways. As this brings me squarely upon a subject I wish to impress strongly upon you, I will illustrate it by a somewhat elaborate example.

A gentleman recently called upon me for my opinion concerning a certain automatic brake for freight cars. The device was new to me, but it lay pretty clearly defined in the mind of my visitor. It was not original with him, but, for the purposes of my illustration, it might have been. Before I could pass judgment, the device must lie as clearly in my mind, perhaps more clearly, than it did in his; so he set out to express his thought. He was what we call well educated, being a graduate of the oldest university in the land, and was well versed in the conventionalities of spoken and written languages. Accordingly, he proceeded to utter a succession of sounds. His lips opened and shut with great rapidity, and, without intermission, a series of sounds fell upon my ears. The sounds I heard were quite familiar to me, as I had been listening to them, in one order and another, for over forty years, and, as they had always been associated in my mind with certain concrete things, and the relations of such things to each other, certain thoughts about those things began to take shape in my mind.

Of course the sounds I heard had not the smallest likeness to the things called up by them in my mind. To an Italian peasant, or to Archimedes of Syracuse, they would have been as unintelligible as the chattering of a magpie. They were purely arbitrary or conventional, yet much of our education had been devoted to their mastery nevertheless, as a means for expressing thought, they were in the present case quite inadequte. The ideas aroused in my mind were confused and fragmentary, and altogether unsatisfactory. The images lacked precision. Had my friend resorted to writing a description of the invention in either English, French, German, Latin, or Greek, using in every case a set of purely conventional symbols (to represent the other set of conventional sounds) which we had both spent years in getting some knowledge of, he would have succeeded little better. Whether speaking or writing, much of his thought he could not clothe in words. He therefore abandoned the wholly conventional or verbal art of expression and turned to the *pictorial*.

But here he soon confessed that his education was deficient. He had never studied the art of representing objects having three dimensions on a surface having but two, and hence he was ignorant of the methods he ought to adopt to express by drawings the objects he was thinking of. However, I caught more of his meaning from some crude attempts at sketching than I had from all his talk. A few lines were luminous with meaning, yet they left far too much for me to supply by my imagination; hence my visitor withdrew and sent me a full set of what were called "working drawings," made by the inventor, who was a draughtsman.

These drawings, though a sort of ocular resemblance to the things signified, were still half conventional, and required on my part a certain amount of training to enable me fully to understand them; this, fortunately, I had received, and through the art of expression embodied in them, I gained a tolerably clear idea of the thought of the inventor. With scarce a written or spoken word they expressed that thought far more clearly and fully than any merely verbal description could do; they showed the relations of parts which were beyond the reach of words.

But my friend was not content to stop there. The drawings had been but partially intelligible to him, with their "plans, elevations, and sections," and, judging me by himself, he believed that a third art of expression would out-value both the others; he therefore invited me to call at a shop and examine a specimen of the device itself, produced by a skilled mechanic.

The *real article*, which is the mechanic's art of expression, proved to be an improvement even upon the thought of the inventor. The latter had not been a mechanic, and he had made the sort of mistakes that draughtsmen who are not something of mechanics always make. Certain parts it had been practically impossible to construct, as they involved shapes that could not be moulded by ordinary means. A nut had been placed where it was next to impossible to turn it, and certain parts, which were to be of cast-iron, had been given such dimensions that the castings would have snapped in pieces while cooling. These errors had been corrected by the mechanic, and the perfected thought lay fully expressed before me

In this illustration we have three greatly different methods of expressing essentially the same thought. Each constitutes a distinct language, and each is absolutely essential to modern civilization. You will note how a crude thought often takes practical shape in the hands of the draughtsman and the mechanic. "Drawing," says Prof. Sylvanus P. Thompson, "is the very soul of true techincal education, and of exact and intelligent workmanship." Those who have tested this can tell how many marvels of ingenuity, as lovely as a *chateau d'Espagne*, have vanished in the presence of "plans and elevations," and how many beautifully drawn designs have been mercilessly condemned as impracticable by judges versed in the laws of construction and the strength of materials.

Much more could be said upon the arts of expression, their relative importance and proper cultivation. You will readily think, as did Lessing in his Laocoön, of poetry, painting, and sculpture. You will recall how lofty thoughts have in all ages found expression in architectural forms; and yet, throughout all the history of architecture, the laws of mechanics, as then understood, and the properties of the particular materials used, have determined the different styles.

In our own age we are trying to express ourselves in iron and steel, and to cast off the fetters of an age of marble and granite.

In a recent address, Mr. Charles H. Ham, of Chicago, said, that by putting thought into seventy-five cents' worth of iron ore, it is converted into pallet-arbors worth $2,500,000." He continues: "Skilled labor is embodied thought, — thought that houses, feeds, and clothes mankind. The nation that applies to labor the most thought, the most intelligence, *i. e.*, that best expresses its thoughts in concrete form, will rise highest in the scale of civilization, will gain most in wealth, will most surely survive the shocks of time, will live longest in history."

But some one will say, as to methods of expression, "one art is enough for me: make me master of one, and I will care for no second." I answer, you are thinking of an impossibility. If a mechanic is only a mechanic, he is never a master, even of his own art. He is crippled at every turn; he is limited in expressing himself to what he can make; he is without that powerful ally, drawing, — the short-hand of the imagination, — and, in the presence of thoughts that baffle concrete expression, he is dumb. Valuable machines even are sometimes purely imaginary. Clerk Maxwell, in his "Theory of

Heat," says, "For the purposes of scientific illustration we shall describe the working of an engine of a species entirely imaginary, — one which it is impossible to construct, but very easy to understand"; referring to Carnot's engine.

In like manner, if one would command confidence as a draughtsman, he must be a mechanic as well. And finally, if I am a student of words alone, and if I go not beyond my dictionaries, I shall never guess their meaning. A large proportion of our emphatic words is technical: they belonged originally to some craft; and none but a craftsman knows their exact meaning.

President Eliot, of Harvard, once said that the highest education was that which gave one the fullest and most accurate use of his mother tongue. I would modify the statement, and claim that the highest and most liberal education is that which, besides cultivating most fully the powers of thought, gives one full command of all the arts of expression.

I need not remark that many, perhaps most, thoughts do not admit of concrete, nor even of pictorial, expression, as, for example, all abstractions; hence they suffer seriously from want of clearness. If you have a clear thought on abstract matters, you can never be sure that you have expressed it clearly.

The thought must precede its expression by any method; and, in the cultivation of the thinking mind, the concrete should precede the abstract. Give children clear and accurate thoughts of real things, of the material world we live in, of real plants and animals, of the laws of materials, of qualities, and then of quantities, before you venture into the field of abstractions. Before you cultivate the high arts, make sure of the low ones: without them as a foundation, no superstructure of fine art can stand over night. As Emerson says (in "Man the Reformer"), "We must have a basis for our higher accomplishments, our delicate entertainments of poetry and philosophy, in the work of our hands. We must have an antagonism in the tough world for all the variety of our spiritual faculties, *or they will not be born.*"

CLEAR-HEADEDNESS.

A habit of clear thinking once formed will never leave us, however abstract our investigations become; while a habit of stopping short with ill-defined results, of resting content with obscure and half-grown mental images, a mental attitude of fogginess, has a stultifying effect which seriously dwarfs the mind. This is a most important subject; but I have place for but a few words of exhortation.

Give children clear thoughts, and begin with the concrete. When the mind is too weary or too sick to clear up obscurities, it is time to seek rest and recreation and fresh air. Beware of straining the powers of attention by too much schooling; beware of overtaxing the mind by two many and too difficult subjects; and especially beware of poisoning the blood and debilitating the brain by bad air The fruit of any and all these evils is mental as well as physical decrepitude.

THE AIMS OF EDUCATION.

But to return. I claim for the three forms of expression, which I have taken pains to distinguish, more nearly equal care and consideration in the education of every child. Teach language and literature and mathematics with a view to make each child a master of the art of verbal expression. Teach mechanical and free drawing with natural tints and with the conventions of shade and color, and aim at a mastery of the art of pictorial expression. And lastly, teach the cunning fingers the wonderful power and use of tools, and aim at nothing less than a mastery of the fundamental mechanical processes. To do all these things while the mind is gaining strength and clearness and materials for thought is the "Function of a Manual Training School." *

PREJUDICES TO BE OVERCOME.

The traditions are heavily against us; but the traditions of the fathers must yield to the new dispensation. As was to have been expected, the strongest prejudices against this reform exist in old educational centres. As President Walker, of the New York Board of Education, frankly admitted at the laying of the corner-stone of Prof. Felix Adler's splendid institution, "The Workingman's School and Free Kindergarten," — the methods and aims proposed by the advocates of manual training schools are a criticism upon the methods and aims of the established system, and nothing is more natural than for it to resent criticism and discourage reform.

No man has done more — nay, no man has done as much — to introduce the manual feature into American education as Prof. John

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[* "It is possible to teach only by four methods: 1st, oral explanation given by the teacher; 2d, written explanation taken from books; 3d, graphic explanation rendered by drawings; 4th, practical explanation obtained from execution. Up to the present time only the first three methods of demonstration have been employed, and nothing but theorists produced; the moment that it is desired to train practical men, the fourth method will be added. and technical education will have been founded." — *Messrs. Gaumont and Guemied before the French Imperial Commission*, 1865.]

D. Runkle of Boston; and yet the School of Mechanic Arts, established by him in connection with the Massachusetts Institute of Technology, has, after an existence of several years, been apparently almost frozen out in the biting atmosphere of that highly æsthetic city. I doubt if one could find on American soil a more unpromising field for a manual training school than beneath the lofty elms of Cambridge and New Haven.

Luxuries in Education.

There are luxuries in education, as in food and dress and equipage, and in wealthy communities the luxuries command the chief attention. At the English Universities of Oxford and Cambridge a large proportion of the students expects to be gentlemen of leisure. The idea of giving heed to the demands of skilled labor, of preparing for lives of activity and usefulness, the idea of *earning* one's daily bread and of supporting one's family, scarcely enters their heads. Either they inherit livings, or they seek to get livings through the church, or they enter the army with commissions purchased by kind friends who wish to get them out of the way, or they go into law and politics. It is no wonder that such men devote themselves largely to the luxuries of education, to pure mathematics, astronomy, philology, Greek, Sanscrit, Latin hexameters, Italian, — in a word, to "polite" learning. In such an atmosphere as that, how incongruous is this plea of mine for an education to *things;* for a training of the hand and eye, as well as the intellect, to lives of useful employment! Yet half the colleges in the United States ape the English universities, and half the high schools ape the colleges. The result of all this has been a certain false æstheticism, which turns away from the materialism of our new notions. The highly cultivated would soar away into purer air and nobler spheres. There is a feeling, more or less clearly expressed, that the material world is gross and unrefined; that soiled hands are a reproach; that the garb of a mechanic necessarily clothes a person of sordid tastes and low desires. As Dr. Eliot, of St. Louis, has expressed it, "It is thought to be a sad descent for a university, whose aim should be the highest education, to stoop to the recognition of handicrafts of the mechanic."

Manual Education.

Perhaps no better general statement of the new creed has been made than that of Stephen A. Walker, in a speech already referred to. He put it for us thus: "Education of the hand and the eye should go along with, *pari passu,* the education of the mind. We believe in making good workmen as well as in making educated intellects. We think these are things that can be done at the same time; and our proposition is that they can be done better together than separately."

As I said in the beginning, this proposition is meeting with general favor among the people. I have pointed out the sources of some of the opposition: it remains for me to touch upon the two objections, which I surmise are about the only ones in the minds of my hearers. You ask first, "Is your proposition practicable?" You doubt the feasibility of uniting in a real school such incongruous elements as arithmetic and carpentry, history and blacksmithing. You fear either that the shop work will demoralize the school, or that the shop work will never rise above the dignity of a mere pastime.

Now I claim not only that what I propose can be done, but that it has been done in St. Louis, and perhaps elsewhere as well.

ORGANIZATION OF A MANUAL TRAINING SCHOOL.

Prof. Thompson, in his valuable essay on the apprenticeship schools of France, classifies French technical schools under four heads:—

I. The school in the workshop or factory.
II. The workshop in the school.
III. The school and the shop side by side.
IV. The half-time schools.

In the first class the school is subordinate to the factory; the boys or girls learn a particular trade, and everything in the school as well as in the shop is designed to meet the wants of those expecting to enter the particular trade. For obvious reasons there can be no general adoption of such a combination in this country. Prof. Thompson gives his verdict in favor of the school and the shop side by side, though there is much to recommend the second plan.

No one of the French plans exactly suits me. I prefer to incorporate manual with intellectual education, and include both under the name school. We don't have what you call school in the morning and shop in the afternoon; nor do we spend the forenoons with tools and devote a few evening hours to study and recitation. We mix up the old and the new without the least compunction.

Nothing can show at a glance just how our school is managed as well as our daily programme.

DAILY PROGRAMME USED DURING THE FIRST TERM, 1881-82.

Classes.	*Divisions.*	*9-11 A. M.*			*11 A. M.-1 P. M.*				*1-3 P. M.*			
Second. Year.	A.	Shop Work.			40 min. Algebra.	40 min. English Hist.	20 min. Study.	20 min. Recess.	40 min. Physics.	20 min. Study.	60 min. Drawing.	
	B.	60 min. Drawing.	20 min. Study.	40 min. Algebra.	Shop Work.				20 min. Recess.	20 min. Study.	40 min. Physics.	40 min. English Hist.
First Year.	A.	Shop Work.			60 min. Drawing.	20 min. Recess.	40 min. Gram'ar.		40 min. Arith.	40 min. Study.	40 min. Physical Geog.	
	B.	40 min. Gram'ar.	20 min. Study.	60 min. Drawing.	Shop Work.				20 min. Recess.	20 min. Study.	40 min. Arith.	40 min. Physical Geog.
	C.	40 min. Arith.	40 min. Study.	40 min. Physical Geog.	40 min. Gram'ar.	20 min. Recess.	60 min. Drawing.		Shop Work.			

NOTES. — 1. Penmanship takes the place of Physical Geography and Physics once a week.
2. Each class has a Music Lesson once a week, extending the daily session half an hour.
3. Composition takes the place of Grammar and History once a week.
4. Spelling occupies half the study time three times a week.

There is here no confusion, no sense of incongruity. The boys go as soberly to shop as to recitation, though I ought not to fail to add that, almost without exception, they delight in the use of tools and it is no small punishment to be kept from the shop for some neglected lesson.

The Manual Training School of St. Louis differs from all other technical schools with which I am acquainted. It much resembles the Boston School of Mechanic Arts, though it differs from it in admitting boys at fourteen instead of fifteen years of age, in having a three years' course instead of two, and in having a full and independent equipment of study and recitation rooms as well as shops.

I gladly avail myself of this occasion to publicly acknowledge our indebtedness to the able reports and papers published by Ex-President Runkle on the Russian system of tool instruction, and the organization and work of his school.

All European schools of the same grade as ours are more or less devoted to particular trades, excepting the school at Komatan, Bavaria (and perhaps other similar schools), where the shop work is three times as much per day as with us, and where book learning is crowded between very narrow limits.

In like manner all other technical schools in this country are either devoted to single trades, or they are of a higher grade.

Prospectus of the School.

A prospectus of our school has just been issued, giving in detail our course of study and the methods of tool instruction. I shall be happy to give a copy to every one who is sufficiently interested to ask for it. To those who do not care for the details, I will say that our course of study runs through three years, in five parallel lines: three intellectual, two manual.

I. A course in Pure Mathematics.
II. A course in Science and Applied Mathematics.
III. A course in Language and Literature.
IV. A course in Penmanship and Drawing.
V. A course in Tool work in Woods and Metals.

Our school is not managed on the assumption that every boy who goes through it will work as a mechanic, or that he will be a manufacturer. Our graduates will doubtless find their way into all the professions; we strive to help them find their true callings, and we prejudice them against none. I have no sort of doubt, however, that the grand result will be that many who otherwise would eke out a scanty subsistence as clerks, book-keepers, salesmen, poor lawyers, murderous doctors, whining preachers, abandoned penny-a-liners, or hardened school-keepers, will be led, through the instrumentality of our school, to positions of honor and comfort as mechanics, engineers, or manufacturers.

No Articles made for Sale.

For the purpose of discountenancing certain grave popular fallacies in this country, I will add a word, even at the risk of repeating what I have said elsewhere, as to our plan of shop management. We do *not* manufacture articles for sale, nor do we pretend to fully teach particular trades.

A shop which manufactures for the market and expects a revenue from the sale of its products is necessarily confined to salable work, and a systematic and progressive series of exercises is practically impossible. If the shop is managed in the interest of the student, he is allowed to leave a step or a process the moment he has fairly learned it; if it is managed with a view to an income (and the school will be counted a failure if its income is wanting), the boys will be kept at what they can do best, and new lessons will be few and far between. In such a shop the pupils will suffer too much the evils of a modern apprenticeship.

"The common apprentice is a drudge set to execute all kinds of miscellaneous jobs. There is no systematic gradation in the difficulty of the exercises given him; more than half his hours are purely wasted, and the other half are spent on work unsuited to his capacity. What wonder that four, five, or six years make of him a bad, unintelligent, unskilful machine!"—*Prof. Sylvanus Thompson.*

A very bright boy of seventeen years had expected last fall to enter a pattern-shop in St. Louis as an apprentice, but was disappointed, there being no vacancy in the number of apprentices *allowed.* He therefore came to the Manual Training School, and during the year made excellent progress not only in carpentry and wood-turning, but in drawing, mathematics, and physics. When he showed me some of his handiwork at the close of the year, I asked him if he would have made equal progress as an apprentice. "No," said he; "I should have spent most of the first year sweeping out offices and running errands." *

SELF-SUPPORTING SCHOOLS.

I fancy there is no more pernicious fallacy than this, of making a school self-supporting by manufacturing for the market. Suppose you attempt to maintain one of those popular humbugs, a commercial college, on that theory; or to run a free medical school without endowment on the self-supporting plan (the student would probably write prescriptions *cheap* and cut off legs for half price); or to manage a public school of oratory and English composition on the strength of an income derived from contributions to newspapers and magazines and from orations made and delivered to order. Nothing could be more absurd; and yet the cases are closely parallel. No, do not be beguiled by the seductive promise of an income from the shop. Admit from the first the well-established fact that a good school for thorough education, on whatever subject, costs money, both for its foundation and its support.

Closely connected is the matter of teaching particular trades, to which the lads shall be strictly confined. Such a course may work well in monarchies, where the groove in which one is to run is cut out for him before he is born, but it is unsuited to the soil and atmosphere of America. A single trade is educationally very narrow, while their number is legion. "The arts are few, the trades are many," says Mr. Runkle. The arts underlie all trades; therefore let us teach them as impartially and thoroughly as possible, and then it is but a step to a trade.

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* Since the above was written, a gentleman told me of his father's experience when learning the trade of a tanner in Philadelphia many years ago. He lived in the family of his employer, and *during the first six months he tended the baby.*

BUT A STEP TO A TRADE.

And this brings me to a very important point. Admitting that with a suitable outfit of tools, shops, etc., a programme such as I have described can be carried out, you ask, "*Cui bono?*—what, after all, is the manual training acquired at school good for? Has the mind been nourished through the fingers' ends? Has the hand gained any enduring skill? Is it really but a step from the door of the manual training school to the shop of the craftsman?"

Experience answers all these questions satisfactorily, and adds that there is scarcely a calling in society that is not edified by manual training. Rousseau once remarked that "to know how to use one's fingers gave a superiority in every condition in life." I recently made systematic inquiry among the parents of my boys as to the effect of the one or two years' training on our pupils. Their reports on the points now under consideration are both interesting and encouraging. They write:—

"Gerald takes great interest in fixing up things generally."

"Charles fixed my sewing machine."

"George has made many little matters of household utility, and seems to delight in it."

"We go to Henry to have chairs mended, shelves put up, etc., and he does excellent work. He made a fine set of screen frames."

"The mechanical faculty was quite small in John's case, and it has been developed to a remarkable extent."

"Leo does all the jobs around the house"; and so on for nearly a hundred pupils.

Again, the parents testify to an increased interest in practical affairs, in shops and machinery, and in such books and periodicals as the *Scientific American*. Beyond question, there is a certain intellectual balance, a good mechanical judgment, a sort of level-headedness in practical matters, consequent upon this sort of training, that in value far outweigh special products. Said Rousseau, in his "Emilius," one hundred and twenty years ago, "If, instead of keeping a boy poring over books, I employ him in a workshop, his hands will be busied to the improvement of his understanding; he will become a philosopher while he thinks himself only an artisan."

As to enduring skill, I will let you judge for yourself. The blacksmithing has occupied the second-year class about two hundred hours, ten a week. Each man had his forge and set of tools, and each executed substantially the same set of pieces. Here is a partial set of the work done. The pieces are numbered in the order in which they were done. They were first wrought in cold lead, while the order of the steps and the details of form were studied, and then they were executed in hot iron. I have a few of the lead specimens here. The boys have not yet learned to *weld* the lead. The instructor's estimate of each piece is shown in the per cent stamped on it. The pair of tongs was made on time, less than four hours. On the day of our public exhibition, twenty boys worked at the forges about two hours; practical smiths who were present highly commended their work. Their weakest point was their management of the fire.

Prof. Clark wished me to bring some of the wood-work. I could easily have brought a cartload, but I thought it not necessary. The boys do not do *fine* work, of course, as these few specimens show. I however have tracings of the main exercises in wood-work.

One of our engineering students, who had had about one hundred and twenty hours in the blacksmith's shop and an equal time in the machine shop, writes to thank me especially for insisting upon his shop practice. Without it he would have had to decline a fine position which with it he filled satisfactorily.

As our school has seen but two years, I cannot appeal to its graduates to answer the question "How far is it from our door to positions as journeymen mechanics?" hence I avail myself of the testimony of Mr. Thomas Foley, instructor of forging, vise work, and machine tool work in the Boston Mechanic Art School. He had himself served an apprenticeship of seven years, and, after several years at his trade, had given instruction for five years. We must consider him a competent judge. In his report to Prof. Runkle, and contributed by the latter to the recent report of the Secretary of the Massachusetts Board of Education, Mr. Foley says: "The system of apprenticeship of the present day, as a general rule, *amounts to very little for the apprentice*, considering the time he must devote to the learning of his trade. He is kept upon such work as will most profit his employer, who thus protects himself. . . . Now it appears like throwing away two or three years of one's life to attain a knowledge of any business that can be acquired in the short space of *twelve or thirteen days* by a proper course of instruction. [I take it that by twelve days he means one hundred and twenty hours, distributed over about forty days.] The dexterity that comes from practice can be reached as quickly after the twelve days' instruction as after the two or more years spent as an apprentice under the adverse circumstances mentioned above."

Mr. Foley secures the best results from lessons only three hours long. He adds: "The time is just sufficient to create a vigorous interest without tiring; it also leaves a more lasting impression than by taxing the physical powers for a longer period. We have tried four hours a day, but find that a larger amount of work and of better quality can be produced in the three-hour lessons."

I consider this testimony of Mr. Foley very conclusive: it effectually disposes of the claim often put forward by practical men, that no boy can learn a trade properly without going to the shop at seven o'clock in the morning and making his day of ten hours, "man-fashion," and that dirt and drudgery and hard knocks, and seasons of intense weariness and disgust even, are essential to the education of a good mechanic.

THE COST.

It remains for me to touch upon the second important question you all have in your minds, namely, that of the cost. You are practical men and women, and you wish now to sit down and count the cost.

We set out in St. Louis to have the best of everything. We bought the best tools, and put in the best furniture. We have plenty of room and light and pure air. We aim to have good teachers and all necessary appliances. Our capacity is about 240 boys, in three classes of 100, 80, and 60 in the first-year, second-year, and third-year classes respectively.

Our building complete cost about	$33,000 00
Our tools and school furniture	16,000 00
If we add the cost of the lot (150'×106¼') . . .	14,400 00
We have as the total cost of our plant . . .	$63,400 00

The building is of brick, three stories high, and very substantial. A perspective view of it, with the three floor plans, is given in the little prospectus already referred to.

Where land is cheap, and less or lighter machinery is used, less money would suffice; but let no one deceive himself by supposing that the reform proposed is to be at once a money-saving one. Such a school costs money; but it is a grand investment. Said one of our benefactors to me not ten days ago, "I feel better satisfied with the money I have put into the Manual Training School than with any other money I have invested in St. Louis."

The same objection, the cost, applies to chemical and physical laboratories of colleges; and one of the main reasons why so many so-called colleges in the Western States devote their attention almost exclusively to classics, mathematics, and history, is that they are too poor to properly cultivate chemistry and physics and practical mechanics. As to the cost of instruction, the shop is about as expensive per hour as the recitation and drawing rooms. Good mechanics, fairly educated, who are at the same time endowed with the divine gift of teaching, are rare. We have a first-class machinist and an expert blacksmith, and pay each $1,200 per year. The size of our divisions is generally limited to twenty members. In drawing we shall occasionally "double up." Incidentals — wood, iron, paper, etc. — and the wear and tear of tools amounted last year to about $10 per head. The total cost of supplies and instruction and all incidentals next year is estimated to be $75 per pupil.

How then, say you, can this costly reform be accomplished? The public schools have no funds to spare, salaries are still too low, and the demand for extensions outruns the supply. As Col. Jacobson, of Chicago, has said, "The alternative before you is more and better education at great expense, or a still greater amount of money wasted for soldiers and policemen, destruction of property, and stoppage of social machinery. The money which the training would cost will be spent in any event. It would have been money in the pocket of Pittsburg if she could have caught her rioters of July, 1877, at an early period of their career, and trained them at any expense just a little beyond the point at which men are likely to burn things promiscuously. It is wiser and better and cheaper to spend our money in training good citizens than in shooting bad ones."

How to go to Work.

There are two ways of going to work.

First. Cut down somewhat, if necessary, the curriculum of higher studies, and incorporate a manual department with your high school. The investment will pay, and the means for further growth will soon be found.

Second. Mature your plans and lay them before your wealthy public-spirited men. Almost for the first time in America, we are harvesting a splendid crop of millionnaires. They abound in every city. They know that boundless wealth left to sons and heirs is often a curse, rarely a blessing, and they would fain put it to the noblest uses. In England, such wealth would naturally go to the establishment of noble families, or the purchase of grand estates, which should be transmitted unimpaired to oldest sons through successive generations.

Our *American peerage* shall consist of those who devote the gains of an honorable career to the establishment of institutions for the better education of the generations that shall come after them. Let others follow the examples of Cornell and Vanderbilt, of Stevens of Hoboken, Gerard of Philadelphia, Johns Hopkins of Baltimore, Case of Cleveland, Rose of Terre Haute, the Commercial Club of Chicago, and those whom I could name in St. Louis.

ANNUAL REPORT OF THE SECRETARY OF THE INDUSTRIAL DEPARTMENT.

PROF. S. R. THOMPSON, LINCOLN, NEBRASKA.

THE following brief report of the progress of industrial education during the year ending July 1, 1882, is necessarily quite imperfect. Having no official right to ask for reports from persons or institutions, your Secretary has been compelled to rely for information upon the kind courtesy of gentlemen connected with various industrial institutions, supplemented by printed reports, newspaper paragraphs, and the like. To the educational friends who have so kindly responded to his request for information, he takes this opportunity to return sincere thanks.

As last year, an attempt has been made to classify the facts obtained under a few leading heads.

I. NEW SCHOOLS FOR INDUSTRIAL LEARNING OPENED DURING YEAR.

The Storrs Agricultural School, of Mansfield, Conn., was opened in September, 1881. This school is supported by the State, and is intended to teach agriculture and horticulture, with subordinate branches of study. The course will be two years. All students are required to perform a certain amount of manual labor each day.

II. NEW INDUSTRIAL DEPARTMENTS IN SCHOOLS PREVIOUSLY ESTABLISHED.

1. The Industrial Department of the State University of Wisconsin has been greatly strengthened by the addition to its working force of a Professor of Botany and Horticulture, and an agricultural chemist. The latter will assist the Professor of Agriculture in the work of agricultural experimentation. A somewhat elaborate series of experiments in sorghum culture and manufacture, and in ensilage and dairying, were conducted.

2. Purdue University, Lafayette, Ind., has added a mechanical department. In this, instruction is first given in the conditions under which mechanical work is done, the manner in which each tool performs its work, after which the pupil goes to the workshop and learns the manual part by actual practice. Shop work was established in this school before, but the special instruction was added

during the past year. This institution now gives instruction in the following subjects: Bench work in wood, machine work in wood, pattern making, vise work in iron, forging iron and steel, machine work in iron.

The agricultural department has been extended in its facilities by the erection of a large building for its special use in experimental work. It is designed to contain class-rooms, seed-rooms, tool-rooms, and rooms for the display of forestry and horticultural products. The chemist of this school has been made State chemist, thus bringing the school into closer relations with the industrial classes.

3. The State Agricultural College of Colorado, at Fort Collins, has added, during the year, floral and garden departments. The farm and garden departments have been greatly extended. The floral department has a fine green-house for the propagation of plants for experimental purposes.

4. The School of Agriculture, Horticulture, and Botany of the University of Tennessee. The agricultural department of this institution has been enlarged and greatly extended, especially in the line of experimentation.

5. The Virginia Agricultural and Mechanical College has been enlarged by the addition of new deparments; viz., horticulture, including pomology, bee-keeping and dairying, a botanical garden, a farmer's garden, together with an experiment station.

6. *Cornell University.* — The department of mechanic arts has, through the generosity of Hon. Hiram Sibley of Rochester, N. Y., added a foundry for iron and brass, and blacksmith shop to its present workshop. Mr. Sibley also gave $8,000 with which to add to the already large appliances for mechanical education. A new chemical and physical laboratory, costing $40,000, is in process of construction, and $18,000 worth of physical apparatus has been supplied during the year, together with $6,000 worth of models and appliances for civil engineering. A fifth year has been added to the course in mechanics and civil engineering.

7. The Manual Training School of Washington University, St. Louis, has had a prosperous year. Whole number of students was 102, and 100 more are to be added in the coming fall. An additional building, to cost $30,000, is erecting, and will enable the school to train 240 boys in three classes. Moulding in sand is to be introduced the coming year.

8. The Miller Manual Labor School of Albemarle, Va., spoken of in my last report, has made excellent progress during the year. The workshop, to cost some $20,000, is about completed, and will be

put into operation in September next. The managers propose to combine in this the Russian shop-work system and that of the Worcester Industrial Institute, —*in*struction and *con*struction both. All boys in this school must work a part of each day, thus combining mental and physical labor.

9. The Agricultural and Mechanical College of Texas reports steady improvement and a largely increased attendance. This school has a course of three years.

10. Lasell Seminary, Auburndale, Mass., still continues in an enlarged and more complete form; its handiwork department, cooking, dress-cutting, millinery, china painting, and art needlework are systematically taught. These things are not merely brought in incidentally, but are systematically taught, with all needed appliances to make such teaching effective. Not business nor economy but instruction is the main end of it.

Technical Art Education.

Among the departments in the Technical Art School at Cooper Institute, New York City, are those of engraving, photo-coloring, and drawing. Pupils have made good progress in the various classes. Miss Powers, the teacher of the class in normal drawing, teaches the basis principles of drawing and color and the rules governing all artistic forms. A number of the graduates are employed by jewellers, house decorators, lace makers, carpet manufacturers, bookbinders, etc. Last year the photo-crayon class, under the intelligent direction of Mrs. Ellis, earned $5,754.59, and the present season will show much increased returns. The engraving class is continually engaged on work for Scribner, Harper Brothers, the Smithsonian Institute, and a publishing house in Detroit. The engravings in *Harper's Bazar* are all done by this class, the pupils of which earned last year $1,588.14. This year that amount will be doubled. Mrs. Carter reports that more than $20,000 was earned during the year 1880–81 by pupils in and out of the school; and it may be here observed that all the money received from these sources goes to the pupils directly, none of it being applied to the support of the Institute.

So far as learned, all the new institutions and departments spoken of in my last report are in operation with increasing usefulness.

In nearly all the large cities is a number of industrial schools, usually supported, directed, and sometimes taught by benevolent ladies, and designed to aid the poorer classes to a more worthy and happy life. The following account of one, clipped from the Chicago *Inter Ocean*, will give a very satisfactory sketch of this class of worthy and useful institutions.

Industrial Schools.

A number of ladies interested in industrial schools for poor children assembled yesterday morning in the Bible work room at Farwell Hall for the purpose of discussing plans of work. During the last three years this particular feature of charitable work has been growing in the city, and from time to time meetings have been held for the object above stated. There has been no special organization, ladies in churches of all denominations being interested and pushing the work in their individual fields of labor. At a previous meeting Mrs. E. P. Rice, Miss E. Dryer, Miss E. Skinner, Mrs. S. A. Kean, and Mrs. Prof. Willard were chosen a committee to present at this meeting a plan for graded work in these schools, where sewing chiefly is taught. Miss Dryer submitted the following as a plan of grading, which was recommended for general use in the Saturday-afternoon sewing classes at the different churches: —

Some Model Lessons.

"The first grade is a trial grade. Instruction is given in holding the needle, length of thread, keeping the work in place, etc. Strips of cardboard are found most useful in this instruction; canvas is also, because by use of these accurate instruction can be given, such as putting the needle straight through the cloth in overhand work. The children can also count the stitches on canvas. On coarse cloth overhand stitches are found to be the easiest for the child, and altogether best adapted to a variety of instruction.

"The second grade, or entering class, is the patchwork class. Children like to furnish pretty blocks for a quilt. They should be taught to finish what they begin. The blocks should be of pretty pattern and pretty muslin.

"The third grade is the garment class. A trial class introduces the scholar to the class. They should practise making hems, buttonholes, fells, and gathers on strips of muslin. Sometimes doll's garments may be made in this trial class, but odd strips of cloth will do as well. The garments are generally simple undergarments, aprons, etc. The object is to teach the child to make useful garments neatly and durably."

III. NEW AND IMPROVED FACILITIES FOR TEACHING MANUAL ARTS IN SCHOOLS FOR DEAF, DUMB, AND BLIND, AND IN REFORM SCHOOLS.

The Ohio Institution for the Deaf and Dumb has raised carpentry to the position of a regular department, and constant instruction is given in it.

IV. INDUSTRIAL TRAINING IN PUBLIC SCHOOLS.

As regards the introduction of industrial training into the public schools, there is not much to report, though public opinion seems in a transition state upon this subject. Learning that an experiment was in progress in the Dwight School in Boston, a note was addressed to Principal Page, which elicited the following courteous and satisfactory reply : —

BOSTON, June 12, 1882.

Dear Sir, — Yours of the 9th inst. was received to-day, and I take pleasure in replying that though we cannot claim to have introduced the Russian system to any extent, we have been using the common carpenter tools in two classes of eighteen boys each, during the last four months.

This is an attempt only. We want to see if any simple system of industrial education can be engrafted on our *public school* work.

The School Board furnished the room only; all other expenses were paid by a number of wealthy ladies and gentlemen, who have been for a long time interested in the matter of industrial training, and who wished particularly to see this experiment tried.

We arranged, therefore, that a skilled carpenter should be secured to give the lessons twice a week, on Monday and Thursday, from 2 till 4 o'clock P. M.

The first class of eighteen boys was elected, from the graduating class, and the second from four other rooms. This gave sufficient variety of material to test the plan. Each pupil pledged himself not to fall behind in his regular studies.

The lessons were well graded, the work was marked at the end of each session; school discipline was maintained throughout, and each boy was held to the same accountability as for his geography or arithmetic.

I have the whole programme of lessons given and the per cent of each boy on every lesson. These will be embodied in a report to be made to the school authorities, and may lead to some action on their part. If it does not, the experiment will end here, so far as this school is concerned, as the room will be needed next term for an incoming class of primary scholars.

So far as results go, the experiment was a success. The interest of the pupils, as well as of their parents, the constant attendance, the growing skill in the use of the tools, and the things really well made, all pointed one way.

The only drawback was the complaint on the part of some of the teachers that two hours per week was too much for some of the pupils to give up. They were falling behind. In one instance I felt obliged to send a boy back to his regular work. But an adjustment of the time-table would regulate this.

The school was visited by parties from widely different cities, and I am confident that all over the country an interest is springing up in this matter, which will go far to decide the character of the teaching "that is to be."

Yours most truly, JAMES A. PAGE.

Cooking in the Public Schools of Jamestown, N. Y.

At stated intervals an accomplished lady — officially called the matron — gives theoretical instruction in the art of cooking to the young ladies of the school. The young ladies practise at home, and bring their work to the matron for inspection.

Recently a supper was given to the Board of Education, at which all the food was prepared by the ladies of the class.

V. BEQUESTS AND DONATIONS FOR THE PROMOTION OF INDUSTRIAL EDUCATION.

1. An extensive institute of technology, at Terre Haute, Ind., is projected. Prof. C. O. Thompson, the president of this section, has been selected to organize this institution, and is now absent in Europe on business connected with his work. Full particulars have not been obtained, but it is understood that abundant means have been provided to build and equip a first-class school.
2. Mention has been made of the munificent gift of Mr. Hiram Sibley to the mechanical department of Cornell University.

VI. PROGRESS OF PUBLIC SENTIMENT IN REGARD TO INDUSTRIAL TRAINING.

The increased and increasing attention given to this subject must be obvious to the most casual observer of the drift of educational thought. From a large number of letters on this subject, there is space here for but the following brief extracts: —

Hon. D. F. DeWolf, Superintendent of Public Instruction, says, "Public sentiment in this direction is increasing slowly."

Hon. Thomas B. Stockwell, State Superintendant of Public Schools of Rhode Island, says: —

"STATE OF RHODE ISLAND,
OFFICE OF COMMISSIONER OF PUBLIC SCHOOLS,
PROVIDENCE, May 6, 1882.

"Rhode Island moves, I think, but very slowly, however, in the line of industrial education. Our people are naturally conservative; so that while we are almost purely a manufacturing people, we hesitate about taking those steps which seem to point the way unmistakably to higher success in the department of manufactures.

"Drawing has not been adopted as yet as a regular into all of our largest towns even, while it is very seldom found in the smaller villages. It has been introduced, however, into several places during the past year, and the feeling in favor of the study is gaining strength very perceptibly. It has been a fixed study in our Normal School ever since its reorganization in 1871, and the graduates are beginning to be felt in this direction as well as in many others. Within the year a special class in mechanical and industrial drawing has been started in our Providence High School, and it has been quite a success.

"For several years we have had in this city a private school of design, which in a small way has done a very good work and commended itself to the people. At the recent session of our Legislature a bill was passed making a small annual appropriation out of the State treasury towards its support, and giving the State Board of Education power to appoint two of its members on the board of directors of the school, and requiring the school to make an annual report to the Board of Education. As the forerunner of a change of policy in reference to this question, I think the above is entitled to some consideration."

Hon. M. A. Newell, State Superintendent of Maryland, says: —

"Public opinion is slowly but surely forming, prejudices are giving way, newspapers which some years ago scouted the idea of teaching boys to work are now taking up the question for serious discussion. On the whole, the outlook is encouraging."

Thomas F. Conrad, president of the Virginia Agricultural and Mechanical College, says: —

"Virginia is undergoing a great but wonderful revolution, and we are seeking to direct it toward great industrial interests, so that the entire State machinery may be in accord with its natural development."

Several other indications of the drift of public opinion in and out of school may be mentioned.

The organization two years ago of an association of teachers of agriculture and horticulture has some significance. This association, including within its membership teachers from a large number of States from Ohio to Nebraska and Kansas, and from Minnesota to Texas, held a meeting at the Agricultural College of Iowa a few days ago. The object of this meeting is mutual improvement in the details of their special work. When the industrial section of the National Educational Association was formed, it was hoped that its meetings might be the focus of such meetings as the one described; but for some reason this expectation has not been realized. Another peculiar feature of the times is the rapid increase of a kind of peripatetic schools of agriculture called Farmers' Institutes. These meetings are largely used by teachers of agriculture and horticulture as a means of extending the art of their instruction so as to include practical working farmers within its influence. But instruction is given by others, and in some places the work becomes largely of the nature of a conference. These meetings are having a profound influence in awaking the public mind to the importance of "mixing brains" with farming. During the winter of 1881–82, seven Western States held a greater or less number of such meetings, and others are preparing to undertake it the coming winter.

The following are some of the publications on subjects relating to industrial education which have been made within the year: —

1. THE INCEPTION, ORGANIZATION, AND MANAGEMENT OF TRAINING SCHOOLS FOR NURSES. No. 1 of circulars of the Bureau of Education, 1882.

2. A MANUAL OF HOUSEHOLD ECONOMY FOR THE USE OF SCHOOLS. Published under the direction of the Kitchen Garden Association.

3. HOW TO MAKE A SHOE. An elaborate and minute detail in rhyme of the various steps in making a shoe, each process being illustrated by an engraving.

KITCHEN AND DINING ROOM WORK. By Mrs. H. J. Willard. Chicago: Geo. Sherwood & Co., 1882.

MANUAL EDUCATION IN PUBLIC SCHOOLS. By L. H. Marvel. Boston: New England Publishing Company, 1882.

THE MANUAL ELEMENT IN EDUCATION. By Prof. John D. Runkle, Ph. D. Boston: Rand, Avery & Co.

In conclusion, your Secretary desires to state that this is not offered as a complete account of the movements in industrial education during the year, but it is as nearly complete as the means at his command enabled him to make it. All of which is respectfully submitted.

THE JOHNS HOPKINS UNIVERSITY OF BALTIMORE.

The report of President Gilman, of the Johns Hopkins University, gives a favorable impression of this somewhat unique but remarkably successful institution. Only six years old, and organized under the disadvantages of an unusual plan, in the face of constant opposition and misapprehension, this University has already vindicated its usefulness abroad and is in a fair way to secure the verdict of substantial approval at home. At present, the catalogue reports the names of thirty-eight resident professors, lecturers, associates, instructors, and assistants, several of whom are well known and justly celebrated in our own and foreign countries. Classes have been taught in all subjects that come in range of proper university education. In addition to the regular staff a number of distinguished persons have officiated as regular and occasional lecturers. During the past year 83 public lectures have been delivered to a daily audience of 137. One hundred and ninety-two students have been in attendance, of whom 110 were graduates from other colleges; the whole body representing twenty-two States of the Union, and several foreign countries. During the past six years 449 students have been enrolled, 275 graduates of other colleges, and 174 proper collegiate students. Over one hundred of these are engaged in teaching, and the recent appointment of Dr. G. Stanley Hall to a lectureship, including didactics, shows a desire to make the University a center of instruction in the higher departments of pedagogics.

It will be noticed that the Johns Hopkins plan is radically the European system of proper University education. Its methods of instruction, for the majority of its students, are adjusted to this plan. The Professor receives his class in a recitation-room fitted up as a library of the special subjects of the department, and the work goes on through lectures, familiar illustration, and a great deal of individual communication, with very little of ordinary recitation. Of course, in the natural sciences and physics, the student is put in contact with the object and largely left to his own resources. Degrees are conferred only after severe examinations. A system of fellowships is open to twenty students every year, by means of which young men of promise are enabled to pursue their studies for an indefinite period. The generous salaries paid to leading professors enable them to devote their time largely to original investigation.

The University supports several periodicals in which the results of such investigations are given to the public, and the University "Circulars" are a constant medium of communication. The library consists of 13,000 volumes, arranged chiefly in class-rooms for the use of students, and other important collections of books in Baltimore are open to the students, containing 179,000 volumes; while Washington, with its vast collections and great opportunities, is within an hour's ride of the city There are various literary clubs and societies, and there seems to be a laudable intention of making the University the helping-hand of every educational work, and a proper center of scholastic, literary, and artistic development for Baltimore. Its importance in the new development of the higher education in the South is already appreciated, and the appointment of President Gilman as one of the trustees of the Slater Fund is an indication of its sympathy with the schooling of the colored people and the rising interests of the common school.

It will be observed that Johns Hopkins has undertaken a peculiar work in American education, hitherto only attempted in the advanced course of a few of our larger universities. The first response has come from abroad, and its most difficult task has been to educate the people of Baltimore to the appreciation of its plan, and the willingness to see the munificent gift of its founder applied in this way. Although wisely giving large latitude to the Board of Trustees, there is little doubt that Mr. Hopkins contemplated a great popular collegiate institution established on his suburban estate in connection with an extensive hospital and medical school, where large numbers of young men, especially from Maryland, Virginia, and North Carolina could be gathered in, at reasonable charge, for ordinary college training. A violent controversy, led by several of the leading men of Baltimore, has been already provoked by the present plan of organization. It is by no means certain what will be the outcome of this agitation. But one thing is to be hoped, in the interest of true university education,—that the present admirable foundation in the city will neither be disturbed nor seriously hampered in its broad plans and far-reaching influences. If, through the development of the original foundation, or by additions from other sources, a proper college could be built up on the Hopkins estate, the different views might be harmonized and a valuable feeder to the University be supplied. For, of course, this experiment will stimulate every leading college in the country to the building of an upper story for advanced work, leaving the Baltimore University largely dependent on Southern patronage for its supply. If, at the same time, a superior college for young women could be endowed in Baltimore, whose advanced students could be admitted to the great opportunities of the University for special study, all plans might be happily harmonized and the monumental city add to its other attractions the fame of a great university town.

FOREIGN NOTES.

THE HIGHER EDUCATION OF WOMEN.

ENGLAND.—So far as Europe is concerned the movement for the higher education of woman, which now engages the attention of every Christian State was first manifested in England. The experience of Queen's College, founded in 1848, proved the necessity of some general scheme for improving the secondary education of girls. Several associations were formed with this object in view, of which the one organized in 1862 for securing the admission of girls to the University local examinations, has been most fruitful in results. To the efforts of this society may be traced Lady Margaret Hall and Somerville Hall, under the auspices of conservative Oxford; and Newnham and Girton at Cambridge. Upon a casual view, the action of the University of London in 1878, extending all its degrees to women, seems to have been the most important measure for promoting their higher education ; but in reality the foundation of Girton, which preceded that act by nine years, was more significant. From the first, Girton followed implicitly the methods and studies of the University, with the intention of proving the right of women to that culture hitherto reserved for men, and their capacity for such culture. In this view the admission of Girton students to the University Tripos is the crowning event in the history of the movement. Girton has, it should be understood, no organic relation to the University. The lectures in college are given partly by the resident lecturers (three in number), and partly by lecturers who come out from Cambridge for the purpose. All the university, and some of the inter-collegiate and college, lectures being now open to women, many Girton students attend lectures in Cambridge, the college providing carriages to take them there and back. The natural science students have most, and the mathematical and classical students have least work in Cambridge. It is the practice, though not obligatory, to read for the degree certificate. The students numbered 67 in 1882 ; the receipts were about $28,800 ; expenditures, exclusive of building, about $27,500. The recent appeal of the Hon. Secretary, Miss Davies, for a fund of £15,000 to extend the accommodations, has brought returns of about £4,000, mostly from original supporters of the college and former students. Miss Davies says: "The amount required is considerable in proportion to the resources of the comparatively few who care for the education of women."

In a recent conference with respect to the Oxford "higher examinations," it was admitted that they carried little weight in comparison with those of Cambridge, and that if they were to be sustained the women's examinations must be approximated to those for men. The master of University College proposed a motion to that effect.

SCOTLAND.—The Glasgow "Association for the Higher Education of Women," encouraged by the "Educational Endowments [Scotland] Act," have issued a memorandum urging on all concerned the importance of giving full effect to that clause of the Act which directs that provision be made for extending the benefits of endowments to both sexes. The memorandum emphasizes the great need of a continuous and systematic course of instruction leading to the university examinations for women, and the impossibility of maintaining such upon uncertain funds. The principals of seventeen leading schools of Glasgow support the Association in the endeavor to secure the benefits of the Act.

IRELAND.—Perhaps no more striking example of the irresistible pressure of ideas could be cited than the question which has been raised upon the admission of women to the Arts Degrees of the University of Dublin. The Academic Council have decided that the action is advisable by a vote of 7 to 4, but the Board have still a power of veto. A sub-committee of the Council has been formed to prepare a plan of instruction.

Meanwhile a similar problem has arisen through the action of the Royal University which extends its examinations and degrees to both sexes. The Fellows appointed by the University are also examiners, and may be required to give instruction to University students in approved colleges. Naturally the Roman Catholic Fellows have drawn together at Dublin. The advantage of being taught by one's examiner is too obvious to have escaped the attention of women students, some of whom have applied for admission to the college lectures, Dublin. Steps are being taken to lay before the standing committee of the Senate a memorial from all the women students of the University on the subject.

FRANCE.—In France the education of girls has become a feature of State policy. Normal schools are required to prepare teachers for the national schools, and lycées and colleges for girls, as a means of counteracting the influence exercised by the church through scholastic agencies. The five institutions already opened under the law of Dec. 21, 1880, establishing lycées and colleges for girls, have been referred to in a previous number of EDUCATION. In addition to these, twenty-six towns have voted to accept the provision of the law, and thirty-eight others report the matter under consideration.

Prior to the passage of the law of Dec. 21, the education of girls had been materially improved through the influence of the diplomas of capacity (*diplômes du brevet de capacité*) which correspond to a teacher's diploma in this country, excepting that they represent fixed standards of attainment. The number of these diplomas conferred in the nine departments of the Academy of Paris from 1855 to 1880 was 33,616, of which 24,171 were obtained by young women; viz., 22,068 upon the elementary examinations, and 2,103 upon the superior. In 1881 there were awarded to girls 3,164 diplomas. Of these, 150 went to candidates from normal schools and courses, 418 to teachers trained by religious orders, while of the remainder it is estimated that at least 1500 were obtained by candidates who had no intention of teaching, but sought the diploma as an evidence of proficiency in their studies.

In 1867 a society was formed at the Sorbonne for promoting the secondary education of girls, through whose efforts some of the most eminent professors have been induced to admit women to their instruction. As a result of this provision 109 diplomas were awarded to girls upon examination at the Sorbonne and the Faculties of the departments from 1867 to 1882. They were distributed as follows:

Baccalaureate of Letters, ...	49
Baccalaureate of Sciences, ...	32
License in Letters, ...	2
License in Sciences, ...	3
Doctor of Medicine, ...	21
License as health officer (*Officier de santé*), . . .	1
Diploma of Pharmacy, ...	1

To which should be added 29 diplomas of capacity for special secondary instruction. Of the whole number, Paris claims 98.

SWITZERLAND.—The attendance of women upon the Swiss universities is generally known, as well as the action of the Russian government forbidding its subjects to avail themselves of the privilege at Zurich. Since the Russian students have withdrawn, the presence of women in that University has given no occasion for criticism. In 1881, 11 young women followed the course of medicine, and 9 the course in philosophy. The same year Berne numbered 30 women students; viz., 27 in medicine and 3 in philosophy. The majority were Russians. One of these passed the examination for Doctor of Laws, *summa cum laude*, and intends opening an office in St. Petersburg. At Geneva, in 1881, the women students numbered 53.

ITALY—The movement for the secondary education of girls has been constantly gaining strength south of the Alps since 1860. Milan, Turin, Bologna, Venice, Rome, have established municipal schools of superior grade for girls, and, by decrees of 1867 and 1871, these have been placed under the care of the Ministry of Public Instruction. Advocates of progress are now striving to obtain the passage of a law similar to that establishing lycées and colleges for girls in France.

The courses of the University of Bologna are open to women, and in 1878 a young woman obtained there the diploma of medicine and surgery. In 1881 a lady student having completed a four years' course was proclaimed Doctor of Laws. She attained the maximum of marks by her examination according to the unanimous decision of the judges. In 1882 a lady

21 years of age obtained the Diploma of Doctor of Letters, having made 24 marks in 27.

GERMANY.—Germany has a number of excellent secondary schools for girls, but there is little disposition to admit them to the universities. Even the Faculties of medicine are not open to them, and in Bavaria they are formally excluded by a decree promulgated in 1880. Leipzig admits women to the courses and examinations in science, and to the courses in letters and philosopy, but does not grant them diplomas. Gottingen confers degrees upon women, but does not admit them to the courses.

SWEDEN AND NORWAY.—In the Scandinavian countries the higher education of women is encouraged. A royal ordinance of June 3, 1870, opened the medical profession to women who should pass the same examinations as men. As a consequence, the Institute Caroline, at Stockholm, established a special course in anatomy for women; they may pursue the other courses at the Universtty of Upsal. The Wallin School, and the lycée for girls, both at Stockholm, have courses corresponding to those of lycées for boys, and leading to a species of baccalaureate examination. Since 1870 the examination has been passed by fifty young women; some of these have continued their studies at the University; the greater part are engaged in teaching. The king of Norway has signed the petition presented to the Storthing for admitting women to university privileges; henceforth they may present themselves for the examinations in arts and sciences, although they are still shut out from those which lead to public office. This restriction is under advisement.

BELGIUM.—Secondary instruction for girls has been neglected in Belgium until recently, when the government took the matter in hand. What are termed middle schools have been established in a number of places, and more are promised as the demand shall arise. Two normal schools for teachers of the middle schools have also been created,—one at Liege, the other at Brussels.

The question of the admission of women to the universities was first raised in 1875 by a letter of inquiry addressed by the Minister of the Interior, Delcour, to the universities. Without going into the details of the corresdondence, it will suffice to say that the inquiry had special reference to the propriety and legality of admitting women to the practice of medicine. The universities agreed that there was no obstacle, provided women could obtain the necessary preparation and diplomas. In 1878 a lady teacher applied for admission to the course of natural science at Brussels, was refused, and appealed her case to the central jury. She was finally admitted, and in 1881 three other women followed her example.

[The foregoing foreign educational matter has been compiled by our correspondent from reports, periodicals, and letters recently received at the Bureau of Education, Washington, D. C.—ED.]

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EDUCATION.

No. VI.—July, 1883.

STATE EDUCATION.

BY S. N. FELLOWS, D.D., STATE UNIVERSITY OF IOWA.

The importance and value of education were never more fully recognized than they are to-day. In the old world, where monarchs reign, leading statesmen are coming to acknowledge the truth, that the best security of nations lies not so much in their armies and navies as in their schools. Of far greater importance and necessity is the school in a republic where the people are sovereign, and in an age when ideas, not passions, govern the people. As Montesquieu says: "It is in a republican government that the whole power of education is required."

Three leading questions at present engage the attention of thougtful minds upon this subject: *First*, the *kind* of education demanded; *secondly*, the *extent* and *limit* to which education shall be carried; *thirdly*, by whose *support*, and under whose *supervision* shall education be secured? In this paper we shall confine our thoughts to the third question, viz.; by whose support and under whose supervision shall education be secured?

This may be called the battle-ground of the age. The question-Who shall occupy the teacher's chair? bids fair to outlast all other questions, because it is believed that the interests involved are deeper and more vital than all other interests. It may be stated here, that wise and good men are divided in opinion on this subject. Nor is it difficult to account for this diversity. The standpoint of observation is different. The statesman, viewing this question only as a statesman, realizing that the State is bound to preserve and protect its own existence and promote the general welfare, may naturally conclude that so important an agency as the public school cannot, with safety to the State, be left to the voluntary support of private or ecclesiastic organizations. He may, therefore, affirm that the State alone is competent to direct and provide for the education of the people. On the other hand, the minister of the gospel, the churchman, whose energies are employed in building up the church, who is watching and guarding with extreme care every interest of the church,—recognizing the intimate relation between education and the ultimate success of Christianity,—he may very easily come to the conclusion that the church alone is competent, and of right ought, to control the education of the people. These classes cannot be both right. Nor is it probable that either view, though partial, is wholly wrong. The true policy doubtless lies somewhere between these two opinions. Two questions then present themselves for our consideration, *viz:*

First, Shall the State continue to exercise its right of self-protection in the education of children and youth, or shall it abandon that education to the care and support of ecclesiastical organizations whose dogmas may or may not be conducive to the independence and prosperity of the State, and whose educational institutions necessarily, in a new country, lack means, certainty, and universality?

Secondly, Shall the State system of schools, to whose support the plighted faith of the State and Nation has been given, receive the moral support of religious men, or shall they abandon this State system of schools to the care and guidance of the irreligious and give such moral support exclusively to the building and maintenance of denominational schools?

It will be perceived that the former question relates to the State in its organic capacity, the latter to a class of citizens within the State. It will also be observed that the former question is not in regard to the founding of a State system of schools. The State system of public education had its birth more than two centuries ago. In 1636 the General Court of Massachusetts "took the first governmental step to promote education in the New World," by donating four hundred pounds sterling toward the founding of Harvard College and so made the founding of it possible. In 1647 the same Court ordered in all the Puritan colonies, in every township containing one hundred families, the establishment of a grammar school where youth might be instructed and fitted for the university. From that day to this Colonial, Federal, and State governments have pursued a uniform course of strengthening and extending the State system of education. The first Congressional Act for the Northwest, passed in 1785, gave the sixteenth section of every township for educational purposes;

and the Ordinance of 1787 made provision for giving to every new State received into the Union "seventy-two square miles of land for the purpose of a university." Under the provisions of these and similar subsequent acts, over seventy millions of acres of land have been granted the States by the Federal Government. The conditions in every case have been, that all "lands appropriated for the use of schools in any State shall be vested in the Legislature of said State, *in trust*, for the use aforesaid, and for no other use, intent, or purpose whatsoever." In each case "Congress made the State its trustee." All the States west and northwest of the Ohio river, when they were received into the Union, accepted this trust, each State receiving the sixteenth section, and those admitted since 1848 receiving also the thirty-sixth section, for educational purposes; from the sale of which large educational funds have accumulated and are constantly increasing. Each of these States also accepted the "seventy-two square miles of land (and some of them even more) for the purpose of a university," and on this foundation has established its State University, which until the present time has been fostered and maintained by successive legislative action. The question is, therefore, properly stated,—Shall the State *continue* to exercise its right of self-protection in the education of children and youth, or shall it abandon that education to the care of ecclesiastical organizations?

It may be safely affirmed that each State is bound in honor either to carry out in good faith the original intent of the Federal Government in donating these lands, by fostering and maintaining the entire system of education in a manner worthy of the State and Nation, and in accordance with the conditions of the trust; or to return these lands, with all their increased value, or the funds derived from the sale thereof, to the Federal Government whence they came. To permit any part of this system to suffer by neglect or die for want of support would be to violate its contract with the General Government, and would place the State beside the readjusters and repudiators of other Commonwealths.

Here let us pause to analyze the phrase, "State education." It is remembered that ours is not a monarchial, but a republican-democratic, government. The public-school system, like the government, is democratic, the power being vested in the people. The theory of this system is simply this,—State-aid and State-supervision with local control.

Bishop Fraser of England says: "Local self-government is the mainspring of the American school-system." Francis Adams declares that, "The doctrine of the sovereignty of the people, pervading all American social and political institutions, is carried to the fullest limit in the schools of the country." In nearly all of the States, the electors of each town or district, either by a direct vote or through a committee or board of directors, elected by themselves, levy all taxes, build school-houses, employ teachers, select text-books, determine what branches shall be taught, and prescribe rules and regulations for the management and government of the school. State and county superintendents merely supervise the work, and the people exercise the power of control in the public-school system. The design of State aid and supervision is to encourage and systematize the efforts of the people to educate themselves and their children. The wisdom of this system which lays the burden of education upon the hearts of the people is believed to be fully vindicated in its history and results. Notwithstanding the errors and mistakes necessarily incident to it as a human institution so rapidly developed and widely extended, the public-school system as a whole, although in its infancy, has already brought rich returns to the State and Nation.

We may next inquire, Has this system outrun the imperative demands of the State? So long as our government is confronted by an army of five millions of illiterates, one-tenth of the entire population who hold the balance of power in every national election, no one will for a moment claim that in elementary education the Nation should relax her efforts. On the contrary, the safety of the republic demands that the present system of education be supplemented and strengthened by largely-increased national aid to those States in which illiteracy most prevails, and by enactments compelling the attendance of children for a limited period either at public or private schools. Again we ask, Has the State system of higher education outrun the demands of the State? or in other words, Should the State abandon higher education to the care and support of ecclesiastical organizations? It may not be generally known that, not withstanding the efforts of the State and the zeal of the churches in the matter of higher education, and the consequent multiplicity of colleges all over the land, yet the ratio of youth who seek a college education to the whole number of population has been growing less and less year by year for the last fifty years. For statistics upon this subject we are indebted to President Barnard. He says: "The proportion of students in college to the entire population was, in 1840, 1 in 1,549; in 1860, 1 in 2,012; in 1870, 1 in 2,546. In New England, where the population is less variable and there is supposed to be more interest in higher education, the proportion was, in 1826, 1 in 1,513; in 1855, 1 in 1,689; and in 1870, 1 in 1,927."

The reasons for these facts are obvious, being found chiefly in the unprecedented openings for business enterprises from the newness of the country and the consequent development of the national passion for money-getting. We again repeat the fact, that while elementary education has extended, college education has been, and still is, declining; or, as Hon. J. P. Wickersham of Pennsylvania has expressed it, "What we have gained in breadth we have lost in depth.". To the State this is an alarming fact! for while higher education has declined, the demand for it has greatly increased. It is a well known truth, that "it is easier for a nation to gain liberty and enforce rights than, having gained them, rightly to use that liberty and enjoy those rights." Especially may it be affirmed that our nation,—its population having increased from three to fifty millions, its territory having extended from a small tier of States along the Atlantic coast to one-half a continent, its agricultural, mining, manufacturing, and transportation interests having grown to an almost incalculable extent,—demands for its guidance a statesmanship far surpassing that of the revolutionary fathers. And this demand is greatly increased in view of the vast influx of foreign immigrants who come to our shores, not from any sympathy with our institutions or habits of thought, but to escape the oppression of the Old World. Unless these teeming millions are caused to apprehend the nature and genius of our institutions, and become order-loving and law-abiding American citizens, our loved Nation will be swamped in the surf that rolls from European and Asiatic shores.

Shall the State, then, as it enters upon the second century of its national life, when these most difficult problems, financial, civil, social, and moral, are demanding for their solution the widest culture, the broadest and deepest scholarship in citizen and statesman,—confronted also by the fact that this scholarship is on the decline,—shall the State, we ask, at this most critical period of its history, abandon higher education to the care and guidance of ecclesiastical organizations whose dogmas may or may not be conducive to the independence and prosperity of the State, and whose educational institutions necessarily in a new country lack means, certainty, and universality?

It may be affirmed that this higher education can be provided by private or denominational enterprise. But private enterprise is restricted to private ends, and denominational enterprise is limited to denominational ends. Rightly pursued, these ends are in harmony with each other and with the ends of the State. But neither the church nor the State can rightly abandon to the other its own ends or the necessary means for their attainment. If, then, higher education by the State is a necessary means for the attainment of the ends for which the State exists, the State would be recreant to her trust were she to abandon said higher education to the care and support of any other power.

But it is objected that, as only a few seek this higher education, it is therefore unjust to tax the many for the benefit of the few. If the principle were adopted that the State levy taxes only for such education as is sought and obtained by all, the whole system would be destroyed, for even the most elementary education has never been accepted by the five millions of illiterates in our country. If, on the contrary, the principle be adopted of making education open for all and accessible to all, then will the whole system be maintained. Is it not upon this principle that rivers and harbors are improved, roads made, bridges built, courts and jails maintained by public taxation? Not one-fourth of the people ever have a case in court, and it might be declared unjust to tax the many who do not, for the benefit of the few who do, use the courts. Only a few have occasion to employ the courts, yet their maintenance chiefly by public taxation is fully justified on the ground that they are a public benefit. Every man, woman, and child is more secure in person and property because of their existence. The same principle applies to and limits State aid and control in building roads and bridges and improving rivers and harbors. They may be used by only a few but they are open to all, and because they "promote the general welfare" they are rightfully maintained from the public treasury. On precisely the same principle of a sound public policy, higher education by the State is maintained. And the fallacy of the objection lies in the assumption that only the few who receive the education are benefited thereby; that knowledge and discipline acquired are exclusively a selfish possession. As well might one affirm that only the citizens of New York City are benefited by the improvement of New York harbor. As the improvement of that harbor is a national benefit in that it promotes national commerce, so, in the language of Governor Seymour, "What you gain to adorn and feed your mind, you gain for all around you. When you use your property, you take away its use from all others; when you use your knowledge, you can do so only by giving it out to the community in which you live." In other words, a properly-educated man or woman is a public benefaction. Only a comparatively few will seek and acquire this higher education; but it does not therefore become a class-privilege. Genius, rare mental gifts, a thirst for knowledge, are found as often in the homely cottage as in the costly mansion. If these gifted children, rich and poor alike, have an equal chance to enlarge their faculties, enrich their minds, and develop their intellectual and moral powers, then will we have little to fear from an aristocracy of wealth. Without such provision by the State, poor children, however endowed with talent, would be consigned to illiteracy or to the most arduous struggle after knowledge. Bitter class-hatred would then be almost inevitable. Only a few will seek this higher education. Admitted! but these few are the very ones the State most needs, for they become her guardians and benefactors in that they are the leaders of progress in every department of society, and that on them the State must chiefly depend to solve the great social and political problems relating to law and liberty, property and life. The State, therefore, does wisely when she makes provision for necessary higher education, and such provision is equal because it is equally accessible to all, and "it is just because it promotes the welfare of all."

It will be observed that the State aids and supervises, but does not seek to control, higher education. In higher, the same as in elementary education the policy of the State is to help the people to educate themselves. Hence it welcomes and fosters private and denominational educational enterprises, and at the same time seeks to supplement all these by such State provision for higher education as will keep wide open the door of the college to every child in the State who aspires after a college education.

But let us consider the latter part of the question. Shall this higher education be abandoned to the care and support of ecclesiastical organizations whose dogmas may or may not be conducive to the independence and prosperity of the State, and whose educational institutions necessarily in a new country lack means, certainty, and universality? Whether the dogmas of any church in America are or are not conducive to the independence of the State, we do not pause to inquire. We call attention only to the possibility of the fact as revealed in the history of Church and State in older countries, and that in considering the question of abandoning its supervision and support of higher education to the churches, the State must not lose sight of such possibility. Nor is it necessary that we enlarge upon the last statement in the question; *viz.*, that denominational institutions in a new country necessarily lack means, certainty, and universality. That these colleges lack means will not be denied. That this lack of means is a necessity is evident when we consider, first, the great cost of building and properly endowing a college; secondly, the financial condition of the people; and, thirdly, the rapid growth of population, especially in the West. Statistics show that New England has invested in her colleges at the average rate of one million and a quarter of dollars each, and these colleges, in order to keep pace with the growing scholarship of the age, must increase and multiply their appliances for instruction and investigation. A Western college cannot compete successfully with Eastern institutions unless it possess equal educational facilities and of course demands an equal sum for its permanent endowment. Consider, secondly, the financial condition of the people. In the West fortunes are yet to be made; business enterprises are in their infancy when outlays are large and incomes are small. In every department of industry, business enterprise, to say nothing of speculation, has outrun the capital possessed. Men doing a business demanding a working-capital of one hundred thousand dollars, and who, to meet this demand, have borrowed fifty thousand dollars, are not in a condition to assist largely in endowing a college. And this supposed case represents the great West. It is rich in resources, business enterprise, and future prospects, but *in debt*, and therefore poor so far as benevolent purposes are concerned. Let us observe, thirdly, the rapid growth of population in the West. Chicago is a little over fifty years old, and has a population of over one half million. Iowa is thirty-six years old, and contains a population of nearly two millions. The United States at her one-hundredth birthday contained a population of nearly fifty millions.

Colleges, notwithstanding the vast amount of money necessary to build and equip them, must keep pace with this growth of population or the Nation will decline in influence and power. It may be safely affirmed that the churches will not and cannot give the financial support necessary to secure such an increase of properly-endowed colleges. The State alone has the ability,—she can do it, and ought to do it. For the State to withdraw her support of higher education and abandon this responsibility to ecclesiastical organizations under the conditions given, would pave the way to national inferiority if not to ultimate anarchy.

Secondly: Shall the State system of public schools receive the moral support of religious men, or shall they abandon to the irreligious the management and control of this system and give such support exclusively to the building and maintenance of denominational schools? It is believed that a grave error exists in the public mind in regard to public schools. Because they are secular or State schools, they are considered "unchristian or godless." Is it not true that in any school, denominational or State, the most potent religious factor is the presence and personal influence of the Christian teacher? From an extensive observation and inquiry in our own State (and we presume the same is true of other States) we are led to the conclusion that from three-fourths to four-fifths of the teachers in these schools are members of Christian churches. Indeed, many of them are the same teachers found in our Sunday-schools. Not for one hour a week, as in the Sunday-school, but for thirty hours of each week during the six years of their average school-life, the children of our land,—twice as many as are enrolled in our Sunday-schools,—are educated and trained under the watchful care and personal influence chiefly of Christian teachers. Nor is it difficult to account for this fact. The work of training the young mind and heart is so sacred and holy that the pure and the good alone select it as their profession. Instead of saying, therefore, that these schools, conducted to such an extent by Christian teachers, are "unchristian and godless," are we not justified in declaring that there would be, if wisely developed and utilized, more religious power in our public than in our Sunday-schools? As, however, difference of opinion on this subject pertains chiefly to higher education by the State, we will give attention to this.

It is sometimes said that "skepticism and infidelity are found in State universities; that students in them have sometimes lost religious faith, and therefore they should not receive the moral support of religious men." Will some one be so kind as to point us to a Christian college where skepticism and infidelity are not found, or whose students have not sometimes lost religious faith? Over fifteen years of experience and observation have convinced us that there are no conditions, either expressed or implied, imposed upon professors in State universities that are in any way incompatible with the just influence of Christian teachers. Some of the best lessons which we learn in regard to Christian truth come to us incidentally in seeing how religious principle shapes the conduct and life of others. The ordinary history of any school, State or denominational, presents many such opportunities for most effective moral and Christian teaching. Besides, in private conversations, Bible-classes, students' prayer meetings, and on all proper occasions in the lecture-room, the Christian professor may speak as freely in a State university as in a church college. Were it not so, no Christian professor could honorably retain his position for a day. Again, suppose that every Christian minister and layman should give his whole sympathy and support to denominational colleges, and thus all Christian influence be withdrawn from the State university; would they not by this act virtually present the State university to the irreligious, with all its endowments and appliances, and its consequent educational power, to be directed solely in the interests of infidelity? It should be remembered that State universities exist; that to their continued support is pledged the united faith of the State and Nation; that these institutions are therefore to increase in influence and power, and that this influence will be Christian or infidel in proportion as churches give to, or withhold from them, their sympathy and support.

But is there not a necessary rivalry between State and denominational colleges? Will some one tell us how there can be rivalry when, as we have before shown, both State and denominational schools tegether do not keep pace with the increasing demands of our growing population? Does the presence of an educated man in a community retard or stimulate the intellectual growth of his neighbors? or a successful business man hinder or promote the financial success of the community? or, does the devout and earnest Christian member discourage or encourage the zeal and activity of the church to which he belongs? A successful State university accomplishes for the State what a successful man in any calling does for the community in which he lives. It is believed, therefore, that so far from being retarded in their growth by the rivalry of State universities, denominational colleges are stronger to-day than they would be had there been no State universities. What, then, is their true relation to each other and to society?

The primary object of the State is to protect itself and secure the general welfare by promoting such a degree of intellectual and moral culture as is demanded for all the duties of good citizenship. For this purpose every grade of institution is established, from the primary school to the university, and all the apparatus and appliances needed for instruction and investigation are, or will be, provided.

The primary object of the churches is to advance Christianity by means of education. The theory is, educated mind rules the world. If Christianity is to conquer the world, it must do so largely through educated mind, and this can be best accomplished by founding and maintaining colleges where such minds are trained. The churches seek to train and guide the world's thinkers in the interests of Christian truth, and we believe they were never wiser in their aims and plans than in this. The State schools, being more munificently endowed, and having intellectual culture primarily in view, will maintain in this respect a high position, and stimulate denominational colleges to furnish similar advantages and occupy an equal grade, or students will be attracted from the denominational to the State schools. On the other hand, denominational schools, having for their primary aim the advancement of Christianity, will permeate the whole system of education with religious influence and compel State schools to maintain a high moral or even religious standard, or students will be drawn from the State to the denominational schools. Each class, then, stimulates the other,—each is the complement of the other, and when adjusted to their appropriate places in our educational system there is no room for conflict or disparagement. Each has a wide field and a grand opportunity,—each deserves the sympathy and support of all good men; and the combined results of their united and harmonious efforts will be a higher intellectual and religious culture, and a consequent nobler civilization.

We believe, therefore, that the State should continue to exercise its right of self-protection by greatly enlarging the facilities for the training of children and youth in all the education demanded for the welfare of the State, and that the State system of schools in all grades should receive the moral support of religious men; and also that the churches should put forth their greatest possible efforts in building and properly endowing their own higher institutions of learning. In this way will the welfare of the State and of the churches be best promoted

INFLUENCE OF CHRISTIANITY ON EUROPEAN MORALS.

BY MISS M. S. HANDLEY, LONDON, ENG.

In order to trace the effect of Christianity on the morals of Europe, we must know something of the moral condition of the civilized world previous to its introduction if we are to have any intelligent notion of the change wrought by Christianity, and understand both what it did and what it did not do. For on this latter point there has been much misapprehension; and although the great philologists of this and the preceding century, and many modern historians, have done much to correct it, by showing that the moral and intellectual life of the world has been a constant course of development, I fear there are many who still regard all that is not distinctly Christian as essentially evil, and who, instead of seeing in Christianity the fruit of the tree of life,—which in the very earliest ages began to put forth tender buds and shoots, the growth into manhood of that spirit whose first faint flickerings awoke in the hearts of the men of the long past,—believe that the Christian alone is "saved," and that all the rest of the world "lieth in wickedness," and see not that in thus attempting to honor Christianity they rob it of its highest glory, and pluck the bright jewel of the Fatherhood of God from the standard of the cross.

Matheson, in his "Growth of the Spirit of Christianity," traces the gradual shading of the Old World into the standpoint of the New, and shows how almost every nation of antiquity embodied some idea that was afterward taken up into Christianity. He begins with China, and says the Chinese idea of the Infinite was that of changelessness, of steadfastness amidst the changefulness of rest, breathless and unbroken; but it was the changelessness that resists progress, and although Christianity takes up the idea of immutability, it is not the changelessness of action, but the changelessness of principle, which it asserts to be one of the attributes of God. Immutability, in the Christian sense, is the changelessness of love; in the Chinese, it is the movelessness which, in a popular sense, attaches to a rock, a stone, a hill.

In India we find the opposite extreme. "China deified immutability; India deified change. To the former the most sacred thing in the universe was the rest of moveless apathy; to the latter the most glorious manifestation of a divine nature was the restlessness of eternal movement." But this was a step nearer Christianity. The God of India is no longer a mere impassive being, incapable of revealing himself. On the contrary, he is recognized as a perpetual revelation. A life which is constantly active is nearer personality than a life which is perpetually still, and in Brahminism there is even more than this. Here for the first time we meet with the idea which has been realized in Christianity,—the incarnation of the divine in the human,—God manifest in the flesh.

But the idea was not fully carried out, as we should not expect it could have been if we believe in the development of the human race. What we are concerned to show is, that the idea was not *new* to Christianity, but that the germ of it was distinctly traceable in Brahminism.

Then in Buddhism there was again a reaction, this time from the unrest of Brahminism. It was a kind of skeptical tendency. If life was so unhappy, why struggle against it? The only blessedness that could befall man must be the loss of life, the extinction of this restless individual being which is ever striving for independence, and whose strivings are the source of its sorrows. Thus in Buddhism the idea of self-sacrifice arises, but again it is not the Christian idea of self-sacrifice,—the joyful giving-up for the sake of greater good,—but it was the self-sacrifice that despaired of finding any good in life.

The next step was that of Parseeism, which was a revolt against this despair. It purposed to trace the root of the evil; it said, if there was unrest there must be something wrong in the universe, and since the wrong could not but be in opposition to the will of the Creator, there must be two sources from which all things flow,—one the source of light, the other the origin of evil. This, though we cannot but regard it as founded on a misapprehension of the nature of evil, was certainly another step toward that religion which was to proclaim redemption from sin as its chief mission-work, and in Judaism this sense of moral evil, which had begun to dawn in Parseeism, becomes the chief feature in the religious worship; but if in one respect Judaism approached Christianity, in another it was farther from some of its leading ideas than many of the Gentile nations.

In Egypt we again find the notion of the union of two natures, which in Greece takes a still higher form. There "man deifies himself." Thus, after the lapse of centuries, the position of the Old World had reversed itself,—from the despair of Buddhism the human spirit was now on the very summit of the mountain of Hope; the idea of God incarnate in humanity was for the first time completed, appropriated; the Gods were conceived as inhabiting the forms of men, and as mingling in the pursuits and avocations of the human race. This, imperfect as it was, was yet a step in the right direction; and thus to Greece must be conceded the honor of having been the first to grasp the possibility of a permanent union between the human and the divine.

And Matheson adds, " The great defect of Greece was that it made the attempt too soon. It sought a union between God and man without "seeking a separation between man and sin. Greece here is at the opposite pole from Judea. In Judea the sense of sin was so great that no union was deemed possible; in Greece the sense of sin was so small"—theirs being the simple, unconscious, joyous life of childhood, delighting in the beauty of holiness, and far removed from the introspective tendencies of the Semitic mind,—" that the union of God and man was regarded as easy."

And then it "happened that the two nations and the two religions the most unlike in all the world were brought side by side. Indeed the whole world was fast gathering into unity, and this itself was the evident preparation for the change. It will be found, throughout the course of history, that wheresoever an advancement is anticipated in the religious thought of man, there is a gradual concentration of the nations into one common focus. At the period of the Reformation the whole continent of Europe may be said to have been governed by two despotic sovereigns,—the King of France and the Emperor of Germany,—and to one or the other of these the balance ever inclined. And so, as Christianity drew near there seemed ever increasingly to be an anticipation of the prophetic vision. "There shall be no more sea," for all the nations that had been held apart came flocking into one. Greece, under the victorious arms of Alexander, subdued not only Syria and Egypt, but even Judea itself; and thus under one government were blended the two most opposite religions,—that which held God to be incapable of union, and that which believed him to be ever united with man. Nor was it possible that such an amalgamation could fail to be beneficial to both. Judea gave to Greece something of that deep sense of transgression which constituted the very essence of its religion; Greece gave to Judea something of that thought of divine nearness which made the incarnation of God in humanity ever a possible event. Hence in the last days of the old world there arose under the teaching of Philo,—a religion which was at the same time a philosophy, a religion which in its speculations after God did not forget the needs of man. Here, as in the ordinary mythology of Greece, there is recognized the possibility of a God manifest in the flesh; but at the same time, in accordance with the spirit of Judea, there is discovered a hindrance to his perfect manifestation. There is something which must be overcome ere the light can break in its full splendor, and that retarding element belongs to the nature of man. Philo placed the root of sin in matter, and in this respect weakened his own estimate of its power. Nevertheless, in opposition to the common tendency of the Greek mind, he considered the influence of sin to be a barrier to divine communion. Accordingly the incarnation of God in humanity must now be effected through a mediator. Thus wonderfully near have we come to the spirit of the cross. And when we consider the language in which this mediator is described, we seem almost already to have entered the precincts of the Christian temple."

Having thus come very near to Christianity, we find that these two nations,—the Greek and the Jew,—together with some other races closely allied to the latter, were destined to be its first converts. I quote a passage from Dean Milman[1] which brings out this point:

> "Though the religion of Christ had its origin among a Syrian people; though its Divine Author spoke an Aramaic dialect, Christianity was almost from the first a Greek religion. Its primal records were all, or nearly all, written in the Greek language; it was promulgated with the greatest rapidity and success among nations either of Greek descent or those that had been Greacized by the conquests of Alexander; its most flourishing churches were in Greek cities; Greek was the commercial language in which the Jews, through whom it was at first disseminated, and who were then settled in almost every province of the Roman world, carried on their intercourse. Primitive Christianity no doubt continued to speak in Syriac to vast numbers of disciples in those provinces; it spread eastward to a considerable extent,—in Babylonia and beyond the Euphrates, into regions where Greek ceased to be the common tongue. Oriental influences, influences even from the remoter East, worked into its doctrine, and into its system; yet even these flowed in chiefly, or in great part, through Greek channels. The Indian Monasticism had already been domiciled in Palestine, and among the Egyptian Jews, Oriental and Egyptian notions had found their way into the Greek philosophy. Among the earlier Christian converts were some of these partially orientalized Greek philosophers. Many of the first teachers had been trained in their schools. In Antioch, in Alexandria, even in Ephesus, there was something of an Asiatic cast in the Greek civilization."

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[1] History of Latin Christianity, Vol. I., p. 1.

This passage also confirms what Matheson says of the drawing together of many nations as the advent of Christianity approached. Lecky[1] also shows, how Rome had become the metropolis of the world, men of all nations mingling in its streets, at the time of the establishment of Christianity. And he and Sir Alex. Grant have also traced farther back the mingling of the two main streams whose later union so deeply modified modern European civilization; but before passing on to this very interesting point, we must note a distinction pointed out by Milman between Greek and Roman Christianity.

We have seen that at the beginning of its course it was promulgated with the greatest rapidity and success among nations either of Greek descent or who had been Greacized by the conquests of Alexander. And then we know that Greece itself, as well as the other countries which it had at one time conquered, had been conquered by Rome, and thus the concentration of many nations rendered still more complete. But though Greece was conquered, it long maintained an intellectual superiority over its conquering rival, and with regard to Christianity these two nations again became rivals. They gave two distinct forms to Christianity,—that of Greece first attaining dominion, and afterward, as in the political world, yielding the empire to Rome.

The first point of difference was that the Greek churches formed a kind of federation of republics. They were held together by common sympathies, common creeds, and common sacred books, and an hierarchy everywhere, in theory at least, of the same power and influence. They were often bound together by mutual charitable subventions; still each was an absolutely independent community. In contrast to this, Roman Christianity gradually assumed a monarchial form, with all the power of a concentrated dominion. The clergy assumed an absolute despotism over the minds of men; not satisfied with ruling princes and kings, they themselves became princes and kings. Their organization was coincident with the bounds of Christendom. They were a second universal magistracy, exercising always equal,—asserting, and for a long time possessing, superior,—power to the civil government. They had their own jurisprudence, the canon law, coördinate with and of equal authority with the Roman or the various other national codes, only with penalties infinitely more terrific, almost arbitrarily administered and admitting of no exceptions, not even of that of the greatest temporal sovereign.

Then with regard to the two systems of monasticism: in the East most of the monks lived in the desert, and tried how they could surpass one another in the tortures they imposed on themselves, and the smallness of the quantity of food on which they could sustain life. In the West monasticism was industrious and productive; it settled colonies, preserved arts and letters, built splendid edifices, fertilized deserts. And these two tendencies, which were exemplified by the retiring into the desert of the one and the mixing in practical life of the other, were still more forcibly brought out in the kind of questions that respectively interested the two branches of the Christian church. Among the Greeks had been for centuries agitated all those primary questions which lie at the bases of all religions,—the formation of the world, the existence and nature of the Deity, the origin and cause of evil; and Greek theology still maintained this speculative tendency, while the only controversy which violently disturbed the Western church was the practical one on which the East looked almost with indifference, the origin and motive-principle of human action, grace, and freewill.

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[1] History of European Morals.

Having now seen how the different nations, each working out apart some leading notion, contributed by the blending of those national ideas to make the comprehension of Christian doctrines rapid and easy. We must endeavor to show how sentiments and ideas more distinctly ethical had been gradually undergoing a change, so that virtues at one time despised were beginning to be appreciated as if they had already caught some of the glow of the rising sun of Christianity, while those that had been the bright stars of the pagan night were beginning to pale in the dawning light of this same sun that was so soon to flood the world with its radiance, and first in this train of lowly virtues that are so eminently Christian,—humility, obedience, gentleness, patience, resignation,—must be ranked humility, obedience and patience also holding a high place.

But to see how they began to acquire this new dignity, we must go back to that first mingling of the two tiny streams from the Greek and Semitic sources which prefigured the later blending of the two full-flowing streams of Greek and Hebrew thought. Stoicism was the result of this first union of Greek and Semitic nations, and it was in this way that such ideas as those of duty and responsibility, self-examination, the sense of shortcoming and moral self-cultivation which were alien to the child-like and unconscious spirit of the Hellenic mind, were first introduced into Greek philosophy. But early Stoicism was still far removed from the Christian ideal; it was much more closely allied to the Roman ethical standard, and it was its congeniality to the spirit of republican Rome that caused it to take such a deep and lasting hold on that nation; but gradually in the later Stoicism we begin to discover germs of those virtues which were to develop under Christian influence and change the ideal type from the heroic, or essentially manly, into one which in contrast may be regarded as essentially womanly, though equally open to man to strive to attain, and needing for its attainment at least as great if not greater strength, firmness, and calm and persistent resolution. We find, for example, Seneca asking with regard to slaves: "Are they not men like ourselves?" and exhorting his friend to examine himself as to whether he is progressing in philosophy and in life.

Lecky,[1] speaking of this change which took place in Stoicism, quotes the following sentences from Epictetus, "The first thing to learn is that there is a God; that His knowledge pervades the whole universe, and that it extends not only over our acts, but to our thoughts and feelings." "To have God for our maker and father and guardian, — should not that emancipate us from all fear?" "What can I, an old man and a cripple, do but praise God? If I were a nightingale, I should discharge the office of a nightingale; if a swan, that of a swan; but I am a reasonable being,—my mission is to praise God, and I fulfill it."

And he goes on to say, that "the same religious character is exhibited, if possible, in a still greater degree in the 'Meditations of Marcus Aurelius,' but that, in one respect, the ethics of the emperor differ from those of the slave. In Epictetus we invariably find the strongest sense of the majesty of man. As the child of the Deity, as a being capable of attaining the most exalted virtue, he magnified him to the highest point, and never more so than in the very passage in which he exhorted his disciples to beware of haughtiness. The Jupiter Olympus of Phidias, he reminds them, exhibits no arrogance, but the unclouded serenity of perfect confidence and strength; and that Marcus Aurelius, on the other hand, dwelt rather on the weakness than on the force of man, and his meditations breathe a spirit, if not of Christian humility, at least of the gentlest and most touching modesty. That was not, it is true, like some of the later saints, who habitually apply to themselves language which would be exaggerated if applied to the murderer or the adulterer. He did not shrink from recognizing human virtue as a reality, and thanking Providence for the degree in which he had attained to it, but he continually renounced, with an unsparing severity, the weaknesses of his character; he accepted, and even solicited, reproofs from every teacher of virtue; he made it his aim in a position of supreme power to check every emotion of arrogance and pride, and to set before him an ideal of excellence which awed and subdued his mind.

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[1] History of European Morals, Vol. I., p. 246.

These are only a few examples of the change that had taken place in moral ideas between the time of the introduction of Stoicism and the establishment of Christianity. It consisted in the growth of a gentler and more cosmopolitan spirit, increase of reverence, humility, self-examination. It arose partly from the influence of Greek manners and the intellectual ascendency of the Greeks, partly from the civil wars which, breaking down class-barriers, threw open the highest offices to energy and genius. Then the empire was in many ways unfavorable to class-distinctions; freedmen became influential citizens, and often attained a powerful influence over the emperors. Through them petitions were presented and the imperial favors distributed, and thus those who had formerly looked down on plebeians, now sought the favors of those who had formerly been slaves. Also the splendid roads, which greatly facilitated traveling and brought the inhabitants of distant provinces into communion with each other; the physicians, writers, etc., who were slaves; the courage and devotion of many to their masters during the civil wars; the immense number of freedmen in the empire,—all tended to produce that enlargement of view and widening of the sympathies which prepared men to receive the teaching of that religion whose watchword is Love.

And now, to review briefly those points in which Christianity differed from the earlier moral teaching. In the first place, it differed in being a religion that made moral teaching one of its most important functions. Most of the earlier religions had been institutions of the State; the chief officer of state was generally the highest religious dignitary; and the principal object of the religious observances was to foretell the future, avert calamity, and obtain the assistance of the gods. "To make men virtuous was no more the function of the priest than of the physician; it devolved, rather, on the philosopher. Nearly all the great philosophers of antiquity made morals one branch of their inquiry, especially since Socrates,—who, from the prominence he gave to ethics, has been called the first teacher of moral philosophy,—and the Stoics and some other of the later sects became almost entirely teachers of morality. But there was a marked distinction between the Christian teacher and the philosopher; the one fixed his eye on the land from which we must flee, the other on the goal to be attained; the one on the city of destruction, the other on the kingdom that was to attain love. The first sought to amend men by awakening the spirit of remorse; the second, by exhibiting the beauty of holiness. Each method had its excellencies and its defects. Philosophy was admirably fitted to dignify and ennoble, but altogether impotent to regenerate mankind. It did much to encourage virtue, but little or nothing to restrain vice. Those who can be attracted by the ideals of virtue must be capable of appreciating them, but the depraved and vitiated need to have their eyes corrected to enable them to see that in moral goodness which shall make them desire it. And here, where the power of the Stoic failed, the success of the Christian teacher was marked; and experience has proved that men who are wholly insensible to the dignity of virtue can be so roused by the fear of judgment as to be awakened to remorse and led to reverse the current of their lives, forsake the downward path and commence the slow and arduous ascent of the mountain road, so difficult for those who have suffered themselves to grow accustomed to the easy downward course, but up which they can be so far carried by the power of a strong emotion as to make the continued ascent possible; and thus emotional power was furnished by Christianity. After it, was love, as we shall see hereafter; but with respect to those who needed to be restrained from gross vice, the emotion appealed to by the clergy appears generally to have been fear, and it was by exciting the imagination that they succeeded in getting such a hold on the minds of men. The early Christians thought the end of the world was at hand, and as this belief faded, pictures of the terrors of future retribution were painted with ever-increasing vividness. Thus a new world was opened to men, and the joys and sorrows of this life paled before those of that which was to come.

Another point in which Christian differed from pagan society was with respect to charity. Charity, like religion, was with the pagans rather a State institution; with the Christian it became much more the practice of individuals. One of the emperors decreed that money should be loaned to the poor at a low rate of interest; several men of rank provided schools, and founded other institutions in some degree corresponding to our orphan asylums; and the way in which corn was distributed to the poor in the Roman empire is well known; but nothing to be compared to the hospitals, schools, and the many efforts of individuals in different departments of charitable work in modern Europe, at all existed in the ancient world. But while owning that the difference is great, we must not forget that the difference in the state of society is also great; that where slavery largely prevails there is not the same scope for the exercise of charity; there must be a large independent, yet indigent, populace for the aid of the benevolent to be needful.

Another point in which a great change took place, and which flowed from the doctrines concerning future happiness or misery, was the opinion as to the sanctity of human life, considered as immortal beings destined for the extremes of happiness or misery. United to one another by a special community of redemption, the first and most manifest duty of a Christian man was to look on his fellow-men as sacred beings, and from this notion grew up the eminently Christian idea of the sanctity of human life. It is a well-known fact that even good men of different nations have failed to see anything wrong in killing some class of the community; sometimes it has been slaves, sometimes Indians or inferior races in colonies, sometimes infants. It was not that they did not perceive the difference between humanity and cruelty, or acknowledge that the one was right, the other wrong; but it is the standard that has differed in different ages; for the same men who looked with indifference, or even with pleasure, at the gladiatorial shows would have regarded as an atrocious crime the murder of a fellow-citizen. Now it was one of the great services of Christianity that, besides greatly quickening the benevolent affections, it definitely and dogmatically asserted the sinfulness of all destruction of human life, either as a matter of amusement or of simple convenience, and thus formed a new and higher standard than any that had hitherto existed in the world.

It was with regard to infanticide and the gladiatorial shows that this influence was most marked. A doctrine of the Fathers, in itself revolting, that unbaptised infants were excluded forever from heaven, had this redeeming quality,—that to it probably we owe the healthy sense of the value of infant-life which so broadly distinguishes Christian from pagan society. It was not that the children were murdered, but that they were probably unbaptised, that excited such universal compassion among the early and mediæval Christians. And with regard to the gladiatorial shows, the Fathers represented the practice as actually sinful, in contrast to the pagan philosophers who, when they did condemn it, spoke of it merely as degrading and inhuman; whereas the clergy refused to admit gladiators to baptism, and excluded Christians who attended the games from communion, which was a terrible penalty to bear. Still, even though thus condemned, it was nearly ninety years after Christianity had become the State religion before they were finally abolished. It was the callousness to human suffering they engendered that rendered them so hurtful; and had they been suffered to remain till the barbarians overran the empire, they might have been seized on by them, and thus indefinitely retarded human progress. The Christian custom of bequeathing legacies for the relief of the indigent replaced the pagan custom of bequeathing sums of money for the games.

Another effect of Christianity was that of promoting philanthropic sentiments among mankind. Among other results, it had an important bearing on slavery. In legislation some important measures were passed, but it is not in the field of legislation we must look for the influence of Christianity upon slavery. Christianity did not prohibit, but distinctly recognized slavery, and labored to encourage habits of docility and passive obedience, not only in the slave but also in other classes of the community; in the monk especially, these qualities were demanded. But much was said by the Fathers about the natural equality of men, the duty of regarding slaves as brothers, of the heinousness of cruelty to them; this had been also said with equal force, though the doctrine was not so extensively spread, by the Stoics, by Seneca and Epictetus, and the principal of the original freedom of all men was repeatedly averred by the pagan lawyers. The services of Christianity in this sphere were of three kinds: It supplied a new order of relations, in which the distinctions of classes were unknown; it imparted a moral dignity to the servile classes, and gave an unexampled impetus to the movement of enfranchisement,—but on this latter point the movement was also prepared for by many other causes, so impossible is it in history ever to draw hard and fast lines; there is always a gradual preparation for higher teaching, and this higher teaching is often perverted when vast numbers of men become disciples, who are not yet sufficiently advanced to understand its true significance.

I fear this truth is still very imperfectly apprehended; it is one of the latest fruits of Christianity; even now there are comparatively few writers who have drunk deeply enough of the spirit of reverence and love to be faithful interpreters of the past. Love and reverence alone hold the keys to the secrets of human life as well as of nature. To the unloving all things wrap themselves in a harsh, repellant garb; they wear an impenetrable mask. We need faith in God to see that He has never left Himself without witness that He has ever been caring for His creatures, leading them step by step to juster views, nobler and loftier ideals, and that what is called the idolatry of the ancients, and regarded as faithful inventions was, as Max Müller and others have shown, the baby-language of the world, its first attempts to give a meaning to what it saw and heard, to express its first conceptions of the things around it, it was appropriate to the age of the world, just as the talk and ways of children are to their age; they only appear absurd when this is not realized. When we unconsciously carry back the educated feeling, knowledge, and culture of the present, and regarding those who were in truth world-children, as men blame them for not thinking and acting as men. Taking this point of view, we shall be able to appreciate the blessings Christianity conferred on mankind without detracting from the culture which had enabled man to receive it, and also be able to account for the deterioration, doctrines underwent as soon as they were embraced by large multitudes, without ascribing these perversions to the essentials of Christianity

The two ways in which Christianity exercised such a powerful influence mankind over were: first, that in the religious services which so deeply affected the minds of men, sanctifying as they did both the joys and sorrows of life, the difference between slave and master was unknown; the second was its honoring those virtues which could be equally well cultivated by the slave as by any other member of the State, while those virtues that had previously been honored, such as self-reliance, magnanimity, dignity, independence, were virtues which it would have been almost impossible for the slave to cultivate. Having now examined, as far as space will allow, the change wrought by Christianity in the moral standard, and seen how some of the virtues which may be regarded as specially Christian had begun to be cultivated, though in an inferior degree, we must now seek to explain the cause of this,—it was the personal influence which was so powerful in Christianity. Although some of the previous philosophical sects may have exhorted their disciples to set up some ideal personage as an example, we all know that any such influence is very different to that of a living friend which Christ is to all Christians. One who not only possessed all the treasures of wisdom and knowledge so that the wise and learned could drink of His spirit, and, being refreshed themselves, tell the secret to others, write books which should bring sunshine and calm to weary hearts and open to the sons of toil bright regions of thought-life, but who Himself stooped to comfort the lowliest, to comfort the most degraded, who took little children in His arms and awoke the loving reverence alike of wise and foolish, rich and poor. This it is the beauty of a character at once real and ideal that not only at first gave such a powerful impulse to Christianity, but which has been a constant source of renovation whenever errors and superstitions crept in and sullied the purity of its doctrinal teaching. As in the fable of old the falling to the earth renewed the life that was failing, so with Christianity when, wounded and faint, it has fallen back of the crucified. it has renewed its life, and risen up with added powers of growth to struggle again and again with evil, and growing stronger each time, the springs of life have thus been reached; and we may feel assured it will yet wear the crown of a noble manhood and its offspring be truly "sons of God."

THE NATURE OF MIND.

BY J. M. LONG.

A true conception of the nature of mind lies at the foundation of a true science of psychology and of education. The material upon which the teacher works is mind. To develop mind into a harmonious and vigorous activity of all its powers, the teacher must understand the nature of the mental structure, and the laws and conditions of its healthful activity. Through the ignorance of teachers there are more cases of mal-treatment in the psychological than in the physiological world. If we could have as sensible perception of mind as we have of the bodily organism, we should see many mental monstrosities,—half-formed minds,—minds unsymmetrical, sent out into the breathing world.

What, then, is the fundamental conception of mind which should guide the teacher in the work of education? In seeking an answer to this question we will first notice, briefly, certain crude and empiric ideas which have gained currency.

1. Mind has sometimes been compared to a piece of *marble* to be carved into form and symmetry. The prominent idea in this figure is the plasticity of mind and its capability of yielding to the disciplinary power of educational training. This idea makes prominent the influence of the teacher in forming and shaping the mind of the pupil, but leaves out of view the more important internal factor of self-activity which is the main element in all true education.

2. Again, the mind has been compared to a substance to be *impressed* like wax. The prominent idea here is the cultivation of the memory. But the figure is greatly defective from the fact that this impressibility is determined by the internal spontaneity of the mind, and not by external force. Mind, in its essential nature, is not passive receptivity, but responsive receptivity.

3. The mind, by a certain school of mental philosophers, has been called a *tabula rasa*, like a piece of blank paper on which one thing may be written as well as another. This was the view of Locke, who was so intensely opposed to the doctrine of innate ideas. This view of mind had its origin in the doctrine that the soul is wholly dependant on the external world for its ideas and impressions. But the metaphor is greatly defective from the fact that it leaves out of view those innate forms of thought and tendencies of the mind to take on

itself a particular development, just as the physical organism tends to grow into the ancestral type of the race. It is not correct to say the mind has *innate* ideas, but it does possess innate tendencies, aptitudes, or organic predispositions which are the common heritage of the human race. These innate forms of thought are commonly called *intuitions.*

4. The mind of the young learner has also been compared to a vessel to be filled. The prominent idea is the acquisition of knowledge. Such an illustration makes mind a mere passive receptacle to be filled. The children in a school are viewed as so many vessels; some larger, some smaller, all sitting in rows to be filled with that sweet and delicious something, called knowledge.

All these illustrations as to the nature of mind are at best but crude metaphors which, while they suggest some important aspect of mind, are calculated to mislead the teacher in the difficult work of training and developing the faculties of the soul.

In order to find a philosophic basis for psychology and education, we must find the fundamental category of mind,—the genus to which it, as a species, belongs. This fundamental idea, whatever it may be, will serve as the central organizing principle in the science of education. From this fundamental principle all the empiric principles of teaching which constitute its methodology can be logically deduced. This fundamental principle will also bring the science of education into true organic unity with its kindred sciences by exhibiting its logical relations and affinities. As the organism of knowledge unfolds into higher phases of development, all the different sciences tend to assume toward one another a closer logical unity. For a time biology, or the science of life, remained in an isolated and unprogressive state. But it is now making progress, and rising into the definiteness of a science by allying itself with the sciences below it, and by adopting their concepts and methods of investigation. In like manner, sociology, the science of human society, is now making rapid progress by adopting the ideas and methods of the organic sphere. In view of this organic unity existing among the sciences it becomes necessary that any branch of knowledge claiming the rank of a science should define its position in the organism of knowledge by showing its relation to other branches in this organism and what ideas and data it derives from them. Now, since the science of education must be based on a true philosophy of mind, it follows that the fundamental truth which must be the organizing principle in Paideutics, or the science of education, will be the true and essential nature of mind. This must be a comprehensive category of thought. Without such a category education cannot attain to the rank of a science. Astronomy did not attain to the clearness and precision of a science until it found an organizing principle by expanding the idea of terrestrial gravity into the larger idea of universal gravitation. We have another striking illustration of the importance of general ideas in science in the inclusion of light, heat, and electricity within the category of undulatory or rhythmical motion as furnished by aëriform phenomena. At first thought no two things would seem more unlike than *acoustics* and *optics*, the science of sound, and the science of light. But modern science penetrating into the essential nature of these two classes of phenomena has proved that they are due to one and the same fundamental form of motion. In like manner, what can seem more unlike to the senses than optics and thermotics,—a sensation of light and a sensation of heat? But science, by a further expansion of the category of rhythmical motion has brought within it the phenomena of heat. And now molecular physics has united under the category of rhythmical or vibratory motion, the phenomena of sound, light, heat, and electricity, which, taken together, we may term *rhythmotics*.

Heeding these suggestions with regard to the nature of the law which obtains in the development of all the sciences, we set out to find the true category of mental phenomena. We, in the first place, call in the aid of consciousness. Doing this, we are assured by an intuition or dictum of consciousness that the most simple and ultimate conception which we can form of mind is that of a *force*, The mind is conscious of itself only when acting, as perceiving, remembering, or willing; but to be conscious of itself while acting is to know itself as a force in energy. Hence, Hamilton says, "I know myself as a force in energy; the not-self as a counter force in energy." This idea of mind as a force is not an inferred idea derived by a discursive process of thought, but is a fundamental idea of intuition. We must, then, conceive of mind as a force endowed with innate and spontaneous energy. But, as Hamilton has said, we can know mind as a force only by placing it in antithesis to external phenomena as counter-forces. "Perception," says Martineau, "cannot befall us by mere exposure to what may be delivered upon us from without. It is not the same as *reception*. It is not realized in a creature,—say an oyster,—that lies flat and has sensations. Neither could it arise from the exercise of an unobstructive activity, spontaneously developing itself in *vacuo*."

But mind is not only a force, but also a *conscious* force, which is self-moved, self-determined, and which acts according to an intelligent purpose or design. It is a force or power of intelligent comparison and discrimination, acting according to the law of interest. The lower unconscious forces of nature which act in the development of the world, we call blind and unintelligent forces. The definite results which these work out must be ascribed to the divine Creator who has established these forces as the expressions of His will. This much we learn of the nature of mind by the metaphysical process of introspection. To learn anything more concerning the nature of mind as a *conscious force*, we must have recourse to external observation and comparison. External nature must furnish us a symbol of thought. All thinking must be carried on under the fundamental and indissoluble relation of subject and object. It hence follows that the internal world of mind to be known must be reflected, antithetically, in the external world of things. Since, then, mind must be expressed in terms of the outer world of perception, a true scientific method requires that it shall be expressed in terms of that particular class of sensible phenomena with which it has the most striking and fundamental analogies. But the force with which mind is most intimately connected, with which it has the closest affinities, is the vital force or life-principle of organic nature. Life may be defined as a spontaneous force which responds to surrounding forces and develops itself into an organized structure. Within such a definition mind itself may be embraced. We are then allowed to view mind as a living, growing, and unfolding force,—a force unfolding into a definite spiritual structure of thought according to the laws of life in general. This conception of mind as life was known to Aristotle, who says, "The action of intelligence is life." We thus have the idea of mind as a spiritual and living force responding to counter objective forces, and drawing from these the experiences which become assimilated and wrought into the fabric of consciousness, mind becomes embraced within the synthesis of universal life because its manifestations and unfoldings conform to those laws and conditions which characterize universal life. We have had a great deal of speculation on the relation of mind and body. The great problem of psychology in past time has been to explain the nature of perception on the false idea of some kind of a *contact* between mind and body. Their point of union is not one of material contact, for this would materialize the mind, but is found in the common concept of life which characterizes both mind and body. In this important concept of life they are brought into the closest union through a *consensus* of action, and a common law of growth and development which characterize both.

We must, then, learn the nature of mind and its laws and conditions of action, by studying it under the concept or category of life. We have before us two fundamental principles to guide us in this study; first that mind as a spiritual substance or force is totally different from the external world of matter; second, that it must be expressed in symbols of thought taken from the external sphere of being. The chosen symbol must be one which will represent most fully and truly the properties and laws of mind. We have in outward nature a regular gradation and transformation of forces from the slowly changing rock up through an increasing dynamic series until we come to the organic world in which the animal presents the phenomenon of power in its highest magazined form. Dynamically inorganic nature and mind present the two opposite poles of being. The fundamental law or primary attribute of the one is *inertia*, while the essential nature of the other is self-activity, or spontaneity. To find the true symbol of mind, we are then directed to that particular department of nature in which we find the important principle of spontaneity or self-movement. But we find this highest dynamic phase of nature only in the sphere of life. Thus, by another train of thought, we are led to life as the true genus or class to which mind belongs. A fundamental property of both mind and life is self-activity. The oldest definition of mind, as given by Plato, *is that which moves itself.* Another consideration identifying life and mind is the fact that both are *organizing* principles. Inorganic life would be a contradiction in terms. Even the amœba which has no permanently specialized parts called organs has the power of forming a temporary specialization of parts, say of a stomach or a foot, as the occasion may demand. Hence, life and structure are correlated. Life ever works according to a pre-arranged plan or pattern, thus exhibiting the law of final cause or purpose. From this aspect of life we get the idea of type which occupies so prominent a place in the study of organic nature. Life, which reveals itself to our apprehension as a spontaneous energy, ever mounting upward along the highway of being, is not a vague, aimless, and random activity which sets before itself no definite object or end. Life ever strives for expression,—strives to embody itself in an organized structure composed of specialized parts called organs, each of which has its own special function to peform. This law or principle of organization also applies to mind. Mind, like all the lower manifestations of life, ever strives after self-development; it seeks to bring into actuality all the possibilities and capacities for action, achievement, possession, and enjoyment which lie enfolded within its inmost being. To this end it places before itself an ideal of growth and development, and unfolds into an organized structure of intelligence, composed of a number of specialized faculties, such as perception, conception, judgement, and volition. Just as the physical life manifests its energies through different functions, such as digestion, circulation, and assimilation, so the spiritual or mental life has also its specialized modes of action. We have morphology in the sphere of physical life, and also in the sphere of mental life. The body does not more surely tend to grow into the regular human form than does the mind to develop into the mental type of the race if placed under favoring conditions. The vital process, whether physical or psychical, begins with an innate tendency to unfold itself according to a pre-arranged plan. The innate tendencies or forms of thought according to which mind unfolds into a definite structure we call intuitions. It is important to understand the relation between the mental faculties and the mental intuitions. Dr. McCosh says, "To me it appears that the intuitive or necessary principles of the mind are just the fundamental principles or regulative laws of the faculties." Then, the intuitions are simply the forms of energy in which mind or intelligence, as conscious life, manifests its activity. Thus, by embracing mind within the synthesis of life the intuitions about which there has been so much discussion, are made to appear as an illustration of the law of ideal form which characterizes all life. The intuitions, or innate tendencies, and forms of action by virtue of which mind tends to unfold into a pre-arranged structure of thought, feeling, and volition, have their counterpart in the organic sphere of physical life in which the vital energies express themselves in regularly-established forms.

Another consideration, showing life and mind to be embraced in the same category of thought, is the idea of *identity*. Whatever difficulty we may experience in attempting to define our idea of identity, all admit that we have this idea. Whatever constitutes individuality, essence, unbroken continuity, one being in the midst of many changes, is identy or sameness. But such an idea cannot be predicated of mere inorganic being. To have identity there must be no loss of substance, no change of essence, for if this changes in the least the identity is destroyed. The particles of any material and inorganic substance are liable to constant change,—to a perpetual flux and reflux. It is only when we come to life, to the sphere of organic being, that we find identity in its true philosophic sense. Life solves the wonderful paradox of preserving identity in the midst of perpetual change. Uniformity is preserved through multiformity, simplicity and unity through complexity and plurality, permanence through perpetual change, and identity and sameness through diversity and unlikeness. Hence, while in the lower sub-organic sphere the forces of nature appear in the form of simple opposites, attractions and repulsions, producing integrations and disintegrations, the life-force in the organic sphere combines in itself both those forms of force, and unites and binds together all its multiform changes into the circle of living unity. This important law of life which we may call the law of identity in the midst of diversity, finds its fullest and clearest expression in the sphere of spiritual being. Mental life has its changes, its perpetually varying states of consciousness.—a perpetual influx and efflux of impressions, in the midst of which the *Ego*, or self-conscious soul, preserves its identity, and ever strives for a fuller realization of its ideal of growth and development. The multitudinous states of consciousness are ever dissolving and flowing away, or losing their present form in order to combine anew, into a higher and more complex form. In the life of the soul, as in the lower realms of life, there is a binding, organizing, and unitizing synthesis ever going on which maintains a living identity and sameness of constitution. Mind or consciousness is the bloom and sublimation of life, for here we have personal or spiritual identity, an organic unity of intelligence amid changing and ever-vanishing feelings and ideas. " Sorrows and joys, sensations, thoughts, and actions,—no sooner are they realized than they are pushed out of the way again, to be followed by others in new succession." Yesterday has run out, not like the contents of a sand-glass which may be made to flow back again in a reverse order; the sands of sensation and perception run out never to return. Yet there is a magic power in the soul which in some mysterious way organically connects the past with the present, and which saves the intricate fabric of mind from destruction. Through the organic unity of consciousness the soul knows itself as a perduring reality, though the same order of experiences is never repeated during any two consecutive moments. Then, we know mind as personal identity which consists in the continuity of spiritual life. Organic identity is the continuity of physical life.

Such a conception of mind which ascribes the fact of personal identity to the organic power of life vindicates the essential unity of the soul. The soul, with its feelings, perceptions, and volitions all reciprocally related and mutually dependent, constitutes a living organic unit. This conception of the essential unity and individuality of the soul was of late development in the history of psychology ; it was not attained by Plato, nor by Aristotle aud his disciples. With

Plato the individuality of the soul of man was merged in the soul of the world. With Aristotle the Noetic principle of the mind was conceived as dwelling apart in the empyrean of pure form.

This conception of the organic unity of the mind in which all the mental faculties are reciprocally related is of the highest importance in education. There can be no greater error in the art of education than the idea that the mind consists of a kind of *congeries* of faculties, each one of which can be trained separately from the others. This would assign to each individual several souls, instead of one, The true view is one mind with diverse modes of energy,—one self-conscious *Ego*, ever asserting its individuality and identity amid the ever-changing and fleeting states of consciousness. We thus connect mind with life through the true conception of identity which consists not in a definite number of particles arranged in the same unchangeable order, not in a sameness of conscious states, but in the organizing principle of life.

The great problem of speculative philosophy has ever been to find some law or principle which would connect the world of mind and the world of external nature without sacrificing either. Idealism attempts to solve this problem by resolving all things into ideas ; realism attempts the same problem by resolving all into things. But the concept of life unites the inner spiritual world with external nature without sacrificing either, through the oneness and consensus of law and mode of action which characterize organism, whether this belong to the spiritual or the material sphere of being. Life manifesting itself through a spiritual organism within, responds to life manifesting itself through a material organism without ; and both these exhibiting a oneness in their fundamental characteristics. The ultimate nature of life, and whether these two forms of life are at bottom essentially one are questions, not of psychology, but of speculative philosophy. "For aught I know," says Coleridge, "the thinking spirit within me may be substantially one with the principle of life and of vital operation. For aught I know, it may be employed as a secondary agent in the marvelous organization and organic movements of my body."[1] Biology, the name for the general science of life, deals with life as this manifests itself in its organic aspects, or as exhibiting a definite structure or organism. Hence, the fundamental idea or category in all the biological sciences is *organism.* Its subject-matter is the structures, functions, properties, and laws of organism. In material organism we have the two coördinate branches, *morphology*, dealing with structure, and *physiology*, dealing with func-

[1] Biographia Literaria, p. 569.

tion. Since mind, as we have seen, exhibits the essential characteristics of life, being a spiritual structure of definite powers and functions, it, too, becomes embraced within the category of organism. One of the great services which Kant rendered to psychology was the reassertion of the important truth that the "mind is an organism of certain structural or *a priori* capabilities, or forms of operation, which necessitate its mode of commerce with all matter of experience, and the notions, thinkings, and beliefs that might accrue from that commerce." By thus embracing mind in the category of organism, we do not necessarily imply that the material organism of the body and the spiritual organism of mind are due to one and the same principle, as intimated by Coleridge. Different and very unlike forces may act according to a common law. Neither should we, in regarding the mind as a complex organism of powers and faculties, retain with this idea materialistic associations. Materiality does not exhaust the predicate of organism. We also have spiritual bodies, structures, organs, and functions. The psychical like the physical life works according to a definite plan, and therefore grows and develops into a spiritual organism which has a definite structure, special faculties which are reciprocally and functionally related, and special laws which condition this activity. These primary laws which preside over the mental processes and determine the limitations and forms of energy which the mental faculties put forth are the *intuitions*. It is the office of logic to treat of these intuitional laws of thought. If the mind were not an organic structure, having its regular and established modes of action, logic would have no existence. Hence, in dealing with the category of organism in the realms of mind, we have the intuitions which determine the innate structure and form of mental action and development. This part of mental science, usually treated in logic, we may term *mental morphology* because it corresponds to morphology in the lower organic sphere, while the consideration of the psychical functions, in the different forms of *thinking*, *feeling*, and *willing*, properly constitutes *psychology*.

We come now to ask what are the essential ideas of an organism. We may mention the following:

1. *Unity*, Unity or individuality is essential to the idea of an organism,—meaning by the term, *individuality*,—what its etymological meaning implies; namely, that which cannot be divided. The more complex and highly developed an organism, the greater its unity. This is preëminently true of the mind. "Its unity and individuality depend upon and require a complex organism of faculties and powers. We observe that in all organisms, the more compli-

cated the structure, the more conspicuous is the individuality. Just in proportion as the structure is complex in its organs and in the variety of its possible functions, just in that proportion is there the possibility of an unshared individuality by means of the greater number of particulars in which no other single being can be like this one."

2. *Organs.* In an organism there must be organs or powers capable of performing distinct and definite actions called functions. The loss or want of some of these organs, with their correlated functions, to this extent mars the completeness of the organism,

3. *Coöperative activity.* All the organs coöperate for the life and well-being of the organism. Each organ is both a means and an end,—a means since it works for all the other organs, and an end since it, in turn, receives from them coöperative aid. *Each for all and all for each,* is the great communistic principle of life.

4. *Final cause* or *purpose.* Another essential idea of an organism is the final cause or purpose which presides over and controls the vital processes. In an organism, whether material or spiritual, we see all the vital energies directed to the realizing of an ideal form of growth and development,—a form which lies enfolded in germ, and which gradually unfolds into a fuller realization of itself. Hence, our analytic thought must go beyond the mere juxtaposition of parts, must go beyond the idea of coëxisting organs as manifesting themselves in space, and fix itself upon the idea of relations, in order to gain a clear conception of an organism. In a material organism this consensus and community of relations are maintained through the mutual coöperation of a number of material organs; in a mental or spiritual organism this community of relations is maintained through the mutual coöperation of a number of spiritual faculties. The true idea, therefore, of an organism is a highly abstract one. The intellect, little accustomed to habits of abstract thought, in endeavoring to form an idea of an organism falls short of the true conception by merely thinking of a collection of coëxisting parts or organs. The abstract idea of the whole which is as essential to the existence of the parts as the parts are to the existence of the whole, must be clearly grasped by the mind. If the mere juxtaposition of parts constituted the true idea of an organism, then a machine would be an organism.

5. *Assimilation.* Another essential idea of an organism is the power or property of assimilation. It is the essential nature of an organism to draw material from its environment, and to assimilate it into its own structure. In sub-organic nature we have mere aggre-

gation, a transfer of energy from mass to mass, and from molecule to molecule; but in organic nature we have a transformation of energy, an ascent from a lower to a higher plane, in which there is an assimilation into the vital structure of the organism.

6. *Development.* Another essential property of organism is growth and development. An organism is not made; its parts are not mechanically fitted together as in the case of a machine, but *evolved.* All the parts or organs of an organism unfold together through an internal expansion and differentiation of structure and function, and and all participate in and grow into full vigor and maturity, through the common life of the whole. This inclusion of mind within the category of organism places psychology on a new basis, suggests new and important ideas, and furnishes a new set of psychological terms. Mind is no longer regarded as it has formerly been in text-books on psychology, in its *statical* aspects, requiring a mere enumeration and description of a certain number of mental faculties; mind, as a growing and unfolding organism, is presented in its *dynamic and genetic* aspects, ever developing into higher and more complex forms of thought, feeling, and volition by successive integrations and combinations of simpler states of consciousness. Thus the organism of mind, like the organism of the body, passes through various stages of growth and development, and unfolds its powers in an ever-advancing complexity until it arrives at maturity.

We may now combine the foregoing elements and characteristics of an organism into a definition. Kant says, "An organism is a body, the parts of which are mutually ends and means." This only brings out the idea of reciprocal activity among the organs. Mr. J. J. Murphy, in his work on *Habit and intelligence,* says an "Organism is that which consists of parts which are all in functional relation to one another." This definition, like Kant's, only brings to view the idea of reciprocal relation and activity among the different organs. Assimilation, which biologists regard as the most fundamental characteristic of an organism, is left out of view. We have seen that the essential ideas of an organism are *unity, organs, coöperative activity, final cause* or *purpose, assimilation,* and *development.* We may define as follows: *An organism is a vital structure which, by the process of assimilation, grows and develops through the unity and activity of different organs which are both means and ends.*

But organisms of every kind are correlated with what biologists term environment. For a long time animal organisms were studied with no regard to their environing relations. The result was that the science of life made little or no progress. Such a method of studying organisms was similar to the effort which men made in endeavoring to account for the phenomenon of combustion without taking into the account the nature of the atmosphere as the surrounding medium. Nearly a hundred years elapsed from the time when Torricelli discovered the weight of the atmosphere, up to the time when the nature of combustion was explained. During all this time, the minds of men were groping in darkness because the atmosphere as the essential medium in which combustion occurs was not taken into the account. Biology has passed through a similar history. To place this science on a firm basis, environing relations had to be taken into the account; the structure and functions of an organ can be truly explained, and their beautiful adaptations and correlations clearly brought to view only by viewing the organism itself in continual interaction with its environment. What has been thus found true of biology is equally true of psychology. Mind as a spiritual organism is correlated with its environment, cosmical and social, and draws from these the multitudinous experiences which are taken up and assimilated into the fabric of intelligence. The social relations, as these appear in the three-fold form of the family, the community, and the State, are preëminently the mental environment, without which man's intellectual and moral faculties could not be developed.

> " Man is not man, but in society,—
> Man means society."

It is from its environment that the mental organism draws those ideas, beliefs, and impressions which stimulate it into the activity of growth and development. It has been truly said that " the fundamental characteristic of man is spiritual hunger; the universe of thought and matter is spiritual food. He feeds on nature, he feeds on ideas; he feeds, through art, science, literature, and history, on the acts and thoughts of other minds." Solitary man living apart from the society of his fellows is an animal. Now, the higher the development of an organism,—in other words, the greater the variety of organs and functions with which it is endowed,—the greater is the sum of life which it is capable of enjoying. It is through its diverse organs that the individual becomes capable of being affected by the multitudinous qualities and relations of things around it. Man as a mental organism has, as already said, a two fold environment, the world of nature and the world of ideas,— the *cosmos* and *humanity*. The greater the variety of the relations in the environment of an organism, the greater must be its development, the more highly endowed it must be in special organs to enable it to respond, successfully, to these relations. This is preëminently true of human society. Here, the greater the variety of individuals and relations in the social environment, the greater, also, is the sum of life for each individual member, and the more extensive and complex must be the development, intellectual and moral, in each individual, to enable him to enjoy this life. Diversity, complexity, and evolution in the social environment demand a corresponding diversity, complexity, and evolution in the mental organism. "The task of the instructor," says Herbart, "consists in transmitting and interpreting to the new generation the experiences of the race." A true education, therefore, must mould and develop the mental organism into a harmonious correspondence with the external cosmical and social order of the world. Whatever is good in the social environment, and which it is desired to perpetuate, must be taken up and assimilated into the mental life of the social units. "The world, past and present, is ours, but only so far as mind and soul can lay hold of and possess its wondrous beauty, and still more wondrous meaning; beyond this, it belongs to the dull ox as much as to us."

The advantages arising from thus including mind in the synthesis of life and organism are many and great;

1. *By such a synthesis we explain the obscure and less-known, by a more familiar and better-known class of phenomena.* This is in accordance with a true scientific method, and is also a fundamental principle in the art of education. Planetary motions remained an obscure and unknown class of phenomena until identified with the more familiar phenomena of terrestrial gravity as exemplified in falling bodies. The historical development of psychology shows that it has made progress in the same degree in which it has become emancipated from theology and metaphysics, and has adopted the method, the concepts, and the language of natural science. We thus explain the spiritual by the material, and the laws and phenomena of the mental organism by those of the physical organism. We thus gain clear and tangible ideas of the spiritual phenomena of mind, and by this means lay the foundation for obtaining the same kind of control over them which we already possess with respect to material phenomena. The ideal end to be aimed at in all the metaphysical sciences is to obtain such a knowledge of the laws and combinations of spiritual forces as to be able to work in the world of mind with the same scientific prevision with which we now work in the world of matter.

2. *By including mind in the genus organism, its true nature is brought to light, and a true organizing law is found for the science of*

education. The logic of science shows that every department of knowledge in attaining to the rank of a science must have a threefold development; it must have its first principles, its middle principles, and its practical rules. The science of education, thus far, has consisted mainly in an empiric methodology made up of a number of rules and principles which have been struck out through the practical experience of the school-room, but which have not yet been arranged into the coherent and systematic form of a science for the want of an organizing first principle. Now, we find that our empiric educational ideas and methods round up into clearness, and attain to the system and precision of science in the same degree in which they become logically articulated with organic laws and conceptions. The system of education for young children known as Kindergarten, in precision and scientific, systematic form, has gone beyond all other departments of education. It is based on the instinct of play common to healthful, exuberant childhood. But child-play itself finds its true explanation as one of the many beautiful and interesting manifestations of life as it mounts upward along the highways of being, and strives for expression and development. Hence, by the synthesis of mind in the category of organism, the educational process can be expressed in terms of organic phenomena, and we can use the terms *growth*, *development*, *organization*, and *assimilation*, in education with meanings as clear and precise as when used in physiology.

3. Another special advantage in expressing the process of mental education in terms of organic law arises from the fact that mental and physical education should go together. We thus gain a great advantage by reducing both processes to the same fundamental law, and by thus having the same set of terms for both the physical and the psychological. With such a generalization of science there is no good reason why mental education should not become as precise and certain in its methods of procedure as physical education.

But mental and organic phenomena not only come under the same general formula of life, but the special laws are also both physiological and psychological.

(*a.*) *The law of growth and development.* This law, which evolves the complex out of the simple, the explicit out of the implicit, holds throughout the entire domain of life as a phenomenon of organism. Growth and differentiation of structure through the expansion of internal forces is a law which rules alike in all phenomena which are vital, mental, and social. "That in the development of the psychic faculties of the organism," says Prof. Vogt, "we have the same process of perfectionment, the same division of labor, the same gradual differentiation as in the development of the bodily organs and tissues, cannot be doubted."

(*b.*) *The law of self-activity.* This, also, is a law of life which holds true both physiologically and psychologically. The expenditure of the physical forces renders inorganic beings inert, and less capable of returning to a state of activity. But life in both the physiological and the psychological sphere feeds and grows on its own activity, the essential law and condition of life is self-activity so that to cease to act is to die. Hence, the great and important function of the teacher is not to impart knowledge, but to rouse up the self-activity of the mind and to impart a mental impetus which shall enable the pupil to get knowledge for himself.

(*c.*) *The law of habit.* This law which finds its empiric statement in the oft-repeated saying that early impressions are most lasting, is a property peculiar to organism. It is not till we come to the sphere of organism that we see the phenomenon or law of habit, the tendency and predisposition of a thing to happen again just because it has happened before. The only account which we can give of this important law of habit as it operates in the realms of life and mind is that it is a property of organism. "Habit and intelligence," says Mr. J. J. Murphy, "are co-extensive with life, and peculiar to it." The psychological aspects of this law are of the utmost importance, owing to its bearing on education.

(*d.*) *The law of heredity.* This is also a law of organism, holding true both in physiology and psychology. Innate tendencies, instincts, aptitudes, and predispositions are transmitted from the parent organism to its offspring. If the human mind has grown and developed, as we believe it has, during historic time, if "the thoughts of men have widened with the process of the suns,"this must be regarded as a result of the law of heredity. By virtue of this law, habits and impressions which have by repetition become an organic part of either the physical or the mental organism are transmitted to descendants, so that in the higher regions of intellect the slow developments of thought and research become condensed into axioms and intuitions.

(*e.*) *The law of memory.* Memory, which has been the mystery of mysteries in metaphysics, is a property of organism, and is no more mysterious than any other property of organic being. In the sphere of physical organism we see an illustration of memory in the power of the vital force to preserve its identity and sameness of structure in the midst of perpetual change. The scar made on the hand in early life is perpetuated, and grows as the body grows, thus showing that the life-principle remembers the injury which it has suffered. The entire nervous mechanism,—brain, spinal cord, and ganglionic centers,—have their unconscious memory; otherwise they would be idiotic and incapable of being taught their functious. The mystery which has hitherto beset memory has arisen from the fact that it has been exclusively confined to the sphere of consciousness. Empiric psychology, in endeavoring to explain the mystery of memory, and to find the fundamental law of its operation, has never been able to go beyond the mere *association* of ideas. But mental association, as Hamilton has shown, presupposes and involves the unconscious activity of the mind. Then, the association of ideas must find its ultimate law or basis in the organizing life-principle of the *ego*, or soul, which binds together the successive states and impressions of the mind into one indissoluble continuity. No amount of repetition, or prior co-existence of ideas in the mind, could bind these together into a coherent unity were it not for the vital energy which seizes upon these and makes them an organic part of the mental structure.

4. By including mind in the category of organism, psychology is made to take its true position in the hierarchy of the sciences, and becomes a branch of biology. This will best appear by giving a classification of the biological sciences as they now stand out in their latest correlations and developments. Phenomena of various orders, vital, mental, and social, as has been said, are now best expressed in the language of mechanism, because this department of science has attained the greatest precision and accuracy. This presents the subjects of scientific inquiry in a two-fold point of view, the *statical* and the *dynamical;* the one expressing ideas of coëxistence, the other of succession. This principle will divide biology into two coördinate branches which may be respectively termed *biostatics* and *biokinetics*. Biostatics views organisms in the statical and coëxistent relations of structures and functions; biokinetics will consider them in the successive changes through which they pass during the different stages of their development. Biostatics will, in turn, divide into two coördinate branches, according as it deals with the organism of matter or the organism of mind. The first aspect gives botany and zoölogy, dealing respectively with the organism of plants and the organism of animals; the second gives psychology based on the organism of mind. Biokinetics also divides into two coördinate branches according as we study the successive phases of development through which organisms pass in their historic aspects, or the causes which have operated to produce these changes. Thus we will have

historical biology, dealing with the formal laws of development in organisms, and *dynamical* biology, dealing with the laws of the forces which have operated. We may, then, fitly close by drawing out these correlated branches of biology into the following tabulated view

Organism :—Biology, the science of Life.

- Biokinetics.
  - Dynamical Biology
    - Anthropology, treating of the causes operating to produce the different types of mankind.
    - Biology, origin of species.
  - Historical Biology
    - Hexicology,[1] the history of successive organisms.
    - Embryology, the history of individual organisms.
- Biostatics.
  - Organism of mind. (Psychology.)
  - Organism of matter
    - Zoölogy, dealing with the organism of animals.
    - Botany, dealing with the organism of plants.

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[1] This term, suggested by Prof. Newark, commends itself to the thoughtful, because the Greek *hexis*, habit, directs the mind to one of the important laws of organism which has operated in the adaptive changes through which organisms have passed during the life-history of the earth.

THE SCIENTIFIC ASPECT OF PERSECUTION.

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It may be taken for granted that but few persons will dissent from an assertion, not only of the propriety, but also of the duty imposed upon everyone of declaring his convictions, if they be expressed at all, clearly and without evasion. The tyranny of precedent is passing away; and after ages of repression and denial it is now admitted upon all sides, that beliefs which are founded in reason and justified by research are entitled to a patient hearing. This doctrine, however, is a modern innovation, for in all past periods, that which seems axiomatic now was then a pretext for persecution. All historical evidence shows that reactionary movements have been most vehemently as well as most honestly opposed by those who were really convinced that the ends sought by investigators had been already attained, and that destructive results alone would follow additional inquiry. Then, as now, this conception marked the inveterate antagonism between the scientific spirit and faith. Then, as now, conservatism tacitly assumed the superiority of learning to culture, of the past to the present, and maintained, or by implication advanced the opinion, that whatever proof there may be of the human mind having greatly developed heretofore, no grounds exist for supposing that it will continue to do so hereafter. The fundamental principle of this school is, that although many important discoveries yet remain to be made, whose social and economic outcome will conduce to the welfare of mankind, that structure upon which these depend, that also to which, with its correlative mental factor, every adjustment of man to his environment is due, has completed its growth and consummated its powers.

It is because this assumption is not only at variance with facts, but likewise radically vicious in its tendencies; and for the reason that in every era when it has been made effectual it has underlain the practice of intolerance, that an attempt will be made to present an outline of the grounds upon which a denial can be founded. The subject-matter of this paper is critical, but scarcely constructive; its object is to review a tendency of the mind under certain conditions, for the elucidation of which illustration has been used in preference to a more abstract method of presenting what was intended to be conveyed, and in no degree has this been intentionally made the medium of animadversion against any system, either moral, civil, or religious.

"Times change, and we are changed." This is a trite quotation, but it is also a terse statement of what lies at the root of all that remains to be said of persecution considered from the scientific standpoint. It announces, on the one hand, a truth which is so palpably and universally valid that no contravention of it is possible; while upon the other, it takes notice of a phenomenon whose character is, both in its origin and mode of operation, so recondite and mysterious that, although it has been studied always, the latest acquisitions of science and philosophy only enable us to partially comprehend the manner in which it will ultimately be explained.

Ideas vary from time to time, and the expression in action of this variation is what is commonly called history; but why do they change? what is changed, and what changes it? An account of any single integer of that vast sum termed civilization exhibits a constancy in variation which has at last been ascribed to the operation of natural law. The phases of individual growth, the transitional forms of an organic type, and the successive stages of national evolution, proceed determinately and in an established order. "From the highest point of view the voluntary vanishes from our sight." Amid the play of forces and the results of their interaction, individual effort is lost, and even the tokens of man's mightiest combinations become inconspicuous. Properly understood, this truth should inculcate a charity apart from mere emotion and separate from specific creeds. Throughout the strange and various story of the past it points us to what "lies in silence and strength behind" all the greatness and meanness, the achievements and the failures of the world. To define the limits of attainment cannot invalidate the obligation of action, nor can the repudiation of anthropocentricism by scientific rationalism ever lessen moral responsibility or depreciate any just claim of human pride. Postponing for the present a formal statement of the principles involved in these postulates, let us examine some conspicuous example of their effects as an introduction

Heresy is a time-honored term of reproach, and one that has usually been applied to the weaker party in a dispute, In the sense in which it is now used the word makes its first grand appearance in that famous decree of the Emperor Theodosius, by which he abolished paganism and suppressed the Arians. "It is our pleasure [so runs the text] that all the nations who are governed by our clemency and moderation, should steadfastly adhere to to the religion which was taught by St. Peter to the Romans; . . . . and which is now professed by the Pontiff Damasus. . . . . We authorize the followers of this doctrine to assume the title of Catholic Christians, and as we judge that all others are extravagant madmen, we brand them with the infamous name of heretics." As this is a typical document, and admirably represents the mental attitude of persecutors, we may profitably study it. Not, however, with reference to the religious belief it authenticates, or even as a Christian reformation, but simply with the view of determining the spirit in which it was conceived, and the proposed manner of its enforcement.

Most educated persons are aware that, in the interval between the dissolution of the Apostolic College and the Council of Nikaia, the Church had no formal and complete body of doctrine. It is customary to suppose that its members were then extremely devout, but it is unquestionable that their theology was at this time in a very chaotic condition. Added to certain irregularities which existed among those who may be called orthodox, there were others, both in the East and West, prevailing in that other body of believers whom the former regarded as heretical. Various founders of sects had appeared to whose opinions the Fathers opposed the weapons of controversy with doubtful success. More than this, the Emperors themselves had often fallen into fatal error; not only the Romans, but the provincials also, were infected, and the greater part of Gaul, and almost the whole of Spain, were in a state of religious revolt. Those synods held at Sinuessa, Alexandria, Elvira, Carthage, Rome, and Arles could not exercise the authority or be certain of the inspiration properly belonging to an ecumenical council, and hence the assembly of the bishops of the universal church in the fourth century, for the purpose of promulgating an authoritative system of faith. Neither the modes of procedure adopted by these prelates, nor the results they arrived at, are now in question. Suffice it to say, that they failed in attaining the object for which they were convened, and that the Council of Constantinople was called by the very Emperor who was the author of this ukase against heterodoxy, for the purpose of completing the work which the Nicean fathers had left unfinished. This subject of the imperial proclamation has been dwelt upon, because it would be difficult to find a better illustration of arbitrary power in alliance with bigotry. On the one hand Theodosius contemplated the instant and unquestioning recantation of a faith whose remote origin was lost in the vague and dim magnificence of ancient tradition, under whose auspices Rome had grown from a petty and piratical colony to be the mistress of the world, during whose dominance all her intellectual triumphs had been won, and in whose communion those great exemplars of valor and virtue had lived, whom he both emulated and venerated. Upon the other part, his edict threw the patronage and punishing power of the State altogether on one side of a disputed doctrine which is from its nature undemonstrable, and this at a time when, both numerically and otherwise, the parties were nearly equal. He knew the chaotic condition of the Church; he was a Spaniard himself, and perfectly well aware that all Arians were not "extravagant madmen." At the time he issued the decree referred to, he was surrounded by orthodox prelates whose characters were far from being unimpeachable, and his peace was often disturbed by those growing disorders which culminated at the election of the same Damasus spoken of as an example of holiness, in the sedition and massacre described by Ammianus Marcellinus.

Under these circumstances certain questions relating to the mental state of Theodosius force themselves upon our attention. Was he sincere in denying the existence of either truth or reason in any other doctrine except that held by himself? There is no doubt that he was entirely so. The Emperor was then a weak and violent person, easily influenced, and prone to submit his judgement to authority? On the contrary, in a degenerate age he was a man whose life exceptionally reflected the glory of Rome's heroic past, brave, temperate, and of a most steadfast mind. Despite these endowments and virtues, was he then but a fool, thus to credit his own infallibility and that of a system untested by time, and whose working, moreover, had in many particulars rendered it obnoxious to the criticisms of both heathens and heretics? Such was by no means the case. Theodosius is generally admitted to have been gifted with very considerable natural powers. How, then, had he freed himself from the restraints of justice and mercy,—how eliminated those incentives to conservatism that former events and his own experience and reflection would naturally originate?

While psychology, which is now a science, was entangled in and obscured by metaphysics; before its principles had been ascertained inductively, and while what was accepted as true concerning the mental faculties and functions of the brain rested upon subjective analysis alone, it would have been impossible to reply to these questions in such a manner as to afford an adequate guaranty for the rejoinder's accuracy. But neither the difficulty of framing a sufficient explanation, nor the doubtfulness of its accptance, can detract from the obligation to render what is supposed to be an answer. The demand for a valid reason for intolerance, would now be properly met with a statement that it was chiefly due to the non-education of certain inhibitory centers in the brain, whose functionation involved deliberateness of volition, because their activity could not be excited without soliciting attention to the associations which experience, both hereditary and acquired, has connected with almost all acts. If the principles upon which this rejoinder rested were required, it is in some such terms as the following that they would be expressed. There is an objective as well as a subjective side to every intellectual phenomenon. The mind is developed as the brain is evolved, and the evolutional process goes on correspondingly in both. This essentially consists in a change, alike of structure and function, from simplicity to complexity. Those relations which are established physically, and those which are established mentally, are correlative, and exist in every degree of intricacy, from the comparatively few and simple connections which are formed by the self-adjustments of a savage to his surroundings, up to the almost innumerable multiplicity of such connections, organized in the civilized man through the adaptation of himself and his race to the environment during an immemorial past. In the relatively uncomplicated intelligence corresponding to the relatively undifferentiated structure, ideation and emotion manifest themselves directly in action, because the conceptions and feelings competent to modify or control activity are not rendered nascent, and for the same reason there is little or no doubt as to the propriety of conduct as well as an extreme inveteracy of habit.

Finally, the faculties of the intellect are not substantialities or entities packed away in the brain-case, and existing there in a discrete and inscrutable manner; they are, physiologically, nervous centers in different degrees of development; and psychologically, coördinations of special orders. If it be admitted that this statement of our mental constitution is true, the deductions in the case referred to are obvious. Once convinced of the paramount authority and supreme importance of a certain dogmatic system, Theodosius acted against non-conformists with entire singleness of spirit. He has been selected as the central figure about which to group these remarks, because it is difficult to find another man of anything like equal power, who was so exempt from the influence of those extraneous causes which have frequently been accessory in determining the practice of persecution. There was nothing for him to gain or lose; his heart was not embittered by controversy, and he had suffered neither at the hands of Arians nor pagans sufficiently to warp his natural character. The attitude he assumed was that of pure, unadulterated bigotry, and he was a bigot not because he was a bad man, but for the reason that he was an undeveloped one. Under like conditions such persons will always be intolerant if they are not restrained by indifference.

Let us look backward! Who were the scourges of the early Christians themselves? Not the worst Emperors; not those whose names are associated with the very wantonness of crime; on the contrary they frequently owed their trials and sufferings to the best characters that the dark annals of the Cæsars preserve. Nero is of course excepted, since it is known that his enormities in this direction were committed for the purpose of withdrawing public attention from himself.

Change the view to that period which, in many respects, is so appropriately called the "dark age," and among those gloomy and fateful figures that loom above the multitude as their instigators and leaders in the most direful excesses of fanaticism, many, no doubt. may be selected, whose motives were impure and whose sincerity was problematical. But to say that all of these men, or still more, that all or even a majority of those whom they incited to deeds before which posterity stands appalled, were interested, vindictive, and utterly abandoned wretches, and that this explains their conduct, is to assert that which will not stand criticism for a moment. Such an allegation invites us to believe, among other absurdities, that human nature was then radically different from what it is now; that at certain periods, more or less remote from the present, men have either transcended or fallen short of humanity. Besides this, the statement takes for granted what we all know to be untrue, namely, that immense masses, differing from one another in all the circumstances of life, have periodically combined during several centuries for the purpose of practicing a wicked and notorious fraud, that innumerable individuals, contrasted in everything else, have associated with the common purpose of acting without a sufficient motive and enduring without an adequate reason; that they have trampled upon their instincts without enthusiasm, consecrated a cause they knew to be unworthy, and devoted themselves to a principle in which they disbelieved.

Reason and experience, negative opinions so disconsonant with their suggestions, and both science and philosophy find a true expression for their conclusions on this subject, in those memorable words in which Jesus Christ commended His persecutors to the mercy of God,—"Father, forgive them, for they know not what they do!"

If one needs illustrations of the effects of intolerance, where, alas, and in what department of human affairs, can they not be found?

The causes leading to the Theodosian statutes were not unique, nor was his opinion that faith might be forced or, failing in this, that the refractory should be destroyed, different from the theory of action accepted by the civil and ecclesiastical powers for a thousand years after his death. Not until the termination of this period was there any general and successful revolt against tenets at once so vicious, so destructive, and so absurd.

In studying the eras of persecution with a view to the illustration of what has been said upon the conditions determining its expression, those arbitrary and inexact discriminations inseparable from almost all historical classifications, cannot be avoided No age stands alone, none can be separately viewed intelligently; but in so rough and imperfect a sketch as this, where the object is rather to depict than to define, outlines of the salient features of isolated periods may be used with advantage. In the sixth century, "the overthrow of paganism and the corruption of Christianity were both complete." From this time until that in which Abelard headed the revolt against authority which may be said to have inaugurated the modern spirit as a power in the world, the annals of Europe afford little that is available for our purpose. All the potentialities of persecution were present but they were inoperative in the absence of causes arousing them to action. Although this statement is not rigorously exact, it nevertheless approximates to exactness. With the fall of the Western Empire the world entered upon a long career of ignorance, superstition, and barbarism. In the East, Cyril had denounced the Institute at Alexandria, and his successor, Theophilus, destroyed it. Those worthy predecessors of reformers like St. Louis, Ximenes, and Zumarraga, the Saints Ambrose, Marcellus, and Martin, urged on the faithful, and what the barbarians had left of the arts of Italy and Gaul was well nigh obliterated. In Athens the schools of philosophy were empty, and in Rome her jurisprudence was forgotten. Constantinople and a few other Greek cities preserved some imperfect remains of classic civilization and genius, but the former could not be disseminated, and the latter found no rivals. But in the twelfth century, amid the vague, uncoördinated movements and indefinate, half-articulated utterances of an awakening world, there was heard a voice that every one, from the successor of St. Peter to the serf, listened to with respectful attention, declaring that the first representative man of our modern era had ventured to maintain the cause of reason against authority. St. Bernard, the "Mellifluous Doctor," did not inveigh against Abelard in vain. Both were eminent men, and both were true to their respective principles; but in this initiatory contest between ecclesiasticism and rationalism the champions were unequally matched. Upon the side of the Saint was ranged most of the learning and all of the power of his age. His opponent stood comparatively alone and unsupported, the exponent of one of those minorities who have always been in the right; who have everywhere been persecuted, and who have never been effectually suppressed. In A.D. 1140, the Council of Sens examined the works of Abelard and decreed that "he had made void the Christian faith"; and further it was decided that the time had come "to silence him by ecclesiastical authority." Then, but not wholly on this account, there began a struggle whose end is, as yet, far beyond our view. The dominant powers awoke to a sense of their insecurity, armed themselves against the tendency of the times, and set their forces in array with the object of stopping a natural and inevitable development, whose principles, character, mode of origin and strength, they utterly miscalculated and misconceived. Then, also, the persecuting spirit shook off its apathy and went abroad with all its tremendous power for evil. For centuries those bloody waves "on whose crests gleam the fires of martyrdom," rose and fell with a dreadful uniformity. Wherever those rights which are now held to be most indefeasible and most sacred were asserted, there also was the destruction most wide-spread and complete. We know that this was unavoidable, and for the most part must acquit of intentional wickedness those whose actions filled Europe "with tears, and blood, and mourning"; but who can reconcile their hearts to this necessity, or depreciate and deny the only means by which it can be done away with? It may be objected that these illustrations are taken from church history, as if the clergy had been the only persecutors. The reply to this is, that at the time spoken of almost all departments in which mental power could express itself were unsecularized. Men were expected to square every intellectual process by theological standards, and if they could not do so, so much the worse for them. A tribunal was established which was of universal competency and unlimited jurisdiction. In a word, the Church was paramount, and while this supremacy lasted, all other histories are merged and lost in hers. Premising only, that when the expression *theological* is hereafter used it is never intended to mean *religious*, let us inquire what was the relation, as expressed in external events, subsisting between the dominant power and persecution, considered as a consequence of incomplete mental development.

It is well known that after the triumph of the Byzantine system, and the union of the spiritual and temporal powers. whatever culture yet remained unexpunged was speedily lost. In lieu of this an elaborate Christian mythology with an immense literature grew up, which was partly of spontaneous origin, and partly constructed from portions of classic, Gothic, and early Aryan tradition. Hagiologies took the place of history, and science and art became extinct.

But let us not misconceive this age. "Human nature never submits long to self-mutilation." The hierarchical establishment which it is so easy to criticise and so common to decry, ruled mankind for a thousand years without opposition, and did so in virtue of its adjustment to the period. It was held sacred in the hearts of millions whose spiritual needs it ministered to, and whose moral necessities it satisfied, and in this regard it is unassailable. Its weakness lay in its polity, its vulnerable point in the doctrine that what was once right must be always right. Wise and far-seeing as it was, the impossibility of fitting invariable formulas to a progressive intelligence was overlooked, and where this was observed, it is undoubtedly chargeable with attempting to stifle that intelligence, let its motives for so doing be what they may.

During the period spoken of, as in every other known to us, ignorant and undeveloped man transferred to the external world those conceptions of causal agency and intelligent action, which his limited powers of observation and imperfect self-knowledge furnished him with. His attention was arrested only by what was unusual, and as he was wholly unable to correlate the more striking and particularly the more disastrous phenomena of nature, with ordinary causes and common effects, they served only "to refract and distort his reason." That the sun rose, or an acorn became in time an oak, did not strike him as being remarkable, but an eclipse, an epidemic, or a wind strong enough to uproot the oak, filled his mind with illusions begotten of terror and astonishment, and under the influence of these he was guilty of the most extravagant crimes and follies. At this period supernaturalism was realized with a vividness of which we can form no conception. To the medieval, everything that was exceptional was magical, and all that he could not account for, miraculous. Incapable of a suspended judgment, and with the worst of his superstitions sanctioned by the Church, persecution followed some of the wild fancies of his undeveloped brain as certainly as famine and disease did his ignorance of agriculture and hygienic laws. It is with involuntary feelings of sorrow and contempt that we remember that our not very remote ancestors would have burned us with clear consciences for doubting that penetential processions prevented the spread of the plague, or that in the matter of comets, which were known to be signs of the wrath of God and harbingers of His vengeance, the ringing of consecrated bells did not afford a rational hope of relief, If these failed to affect the action of gravitation then excommunication might be resorted to, a remedy successfully employed by His Holiness Galixtus III., in the case of a very terrible appearance of this kind with which milder measures had been altogether ineffectual. In this era mathematics, chemistry, and physics were "black arts"; eminent physicians owed their success to association with familiar spirits, and hysteria, epilepsy, and insanity were instances of diabolic possession, whenever they were not inspirations from heaven. Then old women became notoriously addicted to turning themselves into wolves, and young ones to intriguing with the devil. By the supernatural forces that had been ascertained to reside in roots, incantations, and several kinds of filth, weather could be made, disaster ensured, disappointment, sorrow, sickness, and death produced at will. But, happily for the human race, nature was not wholly committed to the keeping of Satan and his emissaries. Saints fortunately abounded at the time, and these accomplished many great and remarkable works. They dried up marshes with prayers, and also caused streams to flow up hill. Furthermore, they took up their abode in fens, and wallowed in the mud like the frogs who committed suicide when they learned that their croaking had disturbed the recluse's meditations. Likewise, as examples to human nature, they grazed after the manner of Nebuchadnezzar, and stood on pillars for a series of years, and burrowed in the earth, and built themselves up in walls. It was generally understood that these and similar devotional exercises conferred upon their perpetrators a quasi-divine power, and accordingly we learn that these blessed ones could stop tidal waves, cause amputated limbs to grow again, and even raise the dead.

Any great library will show that this picture is not overdrawn ; but in contemplating the effects of mental habit upon organic structure, in observing in these illustrations how the various degrees of mental alienation are produced by an intellectual or emotional bias persisted in until the channels of thought become invariable, and the nerve-tracts that lead away from those by which habitual impressions, however initiated are transmitted, fail to irradiate stimulus to contiguous centers so that more differentiated thoughts might occur, we must remember the fact that devoutness and discipline such as this did not always produce disease, or the sanctity of the medieval model constantly issue in monomania. There were men who came unscathed and uplifted from the cloister and the desert; who went forth in the spirit of their master, ministers of peace and love and mercy, to succor the destitute, to comfort the afflicted, to strengthen the weak, and to raise up the down-trodden. Careless of sickness, pain, and death in their calm heroism and constancy of purpose, perfect as no others have ever been perfect in their subordination of self to motives the most holy and generous, bravest among the brave, truest among the true-hearted, they claim at our hands an admiration and reverence which it would be a disgrace to refuse, and have left to posterity the example of lives that no human excellence can ever surpass.

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We have seen that in all men at a certain stage of development, the elements requisite for persecution exist in a nascent state, and that a due amount of specific cerebral excitement being given, intolerant action will certainly follow. Since consecutiveness of illustration is non-essential to the design of this paper, the wars in the East may be selected from among other instances, not because the fanatical spirit exhibited in these was more marked than it was in many subsequent ones, but simply for the reason that they were on a grander scale, and had more important results.

The Eastern Empire fell before the Vandal invasion of Africa, the Persion conquest of its Asiatic provinces, and the final assault of the Turks. Of these, the first shows the immitigable economic disasters sometimes caused by bigotry, while the second and third exemplify both the moral effects produced upon those who have been subjected to its influence, and the manner in which the relatively undeveloped intelligence may be affected by circumstances. For about a century and a half the successors of Genseric persecuted the Catholics of Numidia and Mauritania with unrelenting hostility. At the termination of this period they suffered the same evils which they had inflicted upon others. The Greek invasion was brought about by various causes, but it was prosecuted in the same temper that had actuated the Arian barbarians themselves. Five millions of these heretics are said to have been destroyed, and the country itself, at one time among the most important of the Roman provinces, was effectually and finally ruined.

This tended to the destruction of the Byzantine power through impoverishment and decreased strength, but the Persian campaigns, although they accomplished similar ends, involved moral consequences that were much less conspicuous in the former case. In that, the triumphant party were Christians; in this, paganism overcame Christianity in the ordeal by battle, concerning which it was believed that heaven always interposed to protect the right.

When Chosroes invaded the empire, the persecuted sectaries of Syria, Egypt, and Asia Minor acted as men who in their grade of evolution, and who had experienced their misfortunes, might be expected to act,—they became the allies of the Persians. It is, however, with the effect of this war upon the orthodox that we are at present concerned. The success that attended the invading army was great and rapid, and within a short time Chalcis, Heirapolis, and Antioch fell. But for our purposes it is the circumstances under which they succumbed, rather than the fact of their conquest, that is of interest. Not a city yielded to the arms of the infidels whose ramparts were not said to be guarded by saints and angels and whose gates were not believed to be under the protection of the Mother of God. Not one was assaulted that did not display in its defence consecrated banners, images that had fallen from heaven, pictures and relics that had wrought numerous well-attested miracles. Their populations had seen the foe approach without disqnietude, for they were assured that the Almighty power so frequently displayed in the furtherance of minor purposes and the accomplishment of unimportant ends would certainly, in this hour of their extremity, interfere to save His altars from desecration and His religion from shame.

Horror and consternation attended the calamitous issue of these hopes, but to the fall of Jerusalem succeeded infidelity and despair. When the Persian standards were planted upon Mount Zion and not a single thunderbolt of all that had been promised blasted their ranks, then such men's confidence in the truth and reality of that which they had been taught utterly departed, and as the reaction from an unreasoning faith is always toward an equally unreasoning scepticism, since both are the resultants of similar conditions, the the consequences of their revulsion of feeling soon manifested themselves in their conversion to Islamism. Mediæval Christianity came to an end in this instance not by the substitution of a better for a worse form of belief through correlative mental and physical evolution, but prematurely, and in consequence of events that the people were unable to comprehend.

Far different is the scene presented by the West. In the midst of that pandemonium into which Western Europe was turned during the fifth and sixth centuries, the greatest power this world has ever known silently grew up. Upon this, except in its direct relation to our subject, no criticisms need be made. Suffice it to say, that under Gregory the Great it assumed a definite form, that from this time until the formation of the Lombard League it was the sole representative of order amid surrounding anarchy, and that, absorbing every surviving element of civilization, it only stood between the world and universal barbarism.

But the system of Gregory was the same as that of Hildebrand, Boniface VIII., and Leo X.; from the first it was committed to principles that were essentially unchangeable. That the doctrine of infallibility should finally come in conflict with human intelligence was inevitable, and how it has fared in that contest we know. The subject of our inquiry is limited to a discussion of the means employed in maintaining this dogma, and the efficacy of these as shown in their historical development. Here, as elsewhere, a particular period is arbitrarily selected for the purpose of illustrating the scientific side of the subject.

By what is technically termed the *à priori* method, inductions from the phenomena of consciousness are projected externally; these abstractions from the concrete, as they all originally were, are posited in the outer world, given "a local habitation and a name," and henceforth regarded as existing realities. It is by this process, mainly, that the elements have been peopled with supernatural beings. A belief in magic and witchcraft is almost coeval with human existence, but it required a peculiar combination of circumstances to render the superstition dangerous. In the interval between the twelfth and fifteenth centuries many great and portentous events had taken place. Liberty of thought arraying itself against authority had borne the worst that persecution could inflict, and was not destroyed. The confidence of the ecclesiastical establishment in the resources at its command sustained several severe shocks. In France, England, and Italy the efforts of the Saxon and Franconian emperors toward reform in this body were sustained by a powerful party among the clergy. Philip le Bell, who had violated the personal sanctity of one Pope, chiefly contributed to the election of another, whom he transferred to his own dominions, and to a great extent controlled. Two Councils,—those of Basle and Constance,—disavowed the spiritual supremacy of the Supreme Pontiff, and imputed his assumed official infallibility to themselves and to other convocations of the universal church. Knights of the Temple were accused of irreligion and blasphemy; the south of Europe was filled with heretical sects. Averrhoism had penetrated into the northern universities; the regular and secular clergy were at open war with each other everywhere, and finally such books as the *Everlasting Gospel* and *Commentary on the Apocalypse* diffused rationalistic opinions from the Mediterranean to the upper Rhine, and from the Atlantic to the Danube.

To counteract these evils the Inquisition was established, the discipline of Catholicism became severer and the censorship of ideas more rigorous. Far more generally and deeply than we can now imagine, this prevailing anxiety and apprehension of the heirarchy affected the public mind; so that the earlier part of this era especially was characterized by an almost unexampled degree of mental perturbation. In the midst of this doubt and distress,—perhaps to a great extent on account of it,—an epidemic of superstitious madness broke out which, whether we consider its disastrous moral effects, the unspeakable suffering, or the loss of life it occasioned, has but few parallels among the memorable misfortunes of mankind. "Witch-mania," and the persecutions it gave rise to, are subjects of common reference, and it is also widely known that this form of supernaturalism prevailed extensively, and that many unfortunate people perished in consequence. Comparatively few persons, however, are aware of the vast body of literature existing upon sorcery and witchcraft, or of the dreadful state of mind that these records portray. "More people believed in Satanic compacts and the malign arts of sorcerers then than disbelieve in them now"; the church gave all of her overwhelming influence to the support of these wild and pernicious fancies, and the terrible severity of those punishments she caused to be inflicted upon thousands and tens of thousands of unhappy wretches for purely imaginary crimes, had a direct tendency to confirm the masses in their credulity, and enlarge the sphere in which the persecuting spirit displayed itself.

Fancy can present no picture of more complete and hopeless misfortune than the state of a prisoner of the Inquisition accused of magic. The charge itself cut him off from all human association and sympathy. During forty-eight hours before appearing in the presence of his judges he was allowed neither food nor drink, and was kept in darkness. When he was arraigned counsel was denied him, it was assumed that he was guilty, and he was tortured till he confessed himself to be so.

At the suggestion of places haunted by the memory of great sorrows or crimes the mind involuntarily attempts a restoration of the past, but even when surrounded by everything that can prompt or aid the imagination such efforts are always inadequate. Vague emotions possess us, but it is a beneficent law of nature that under normal conditions even our own personal sufferings can not be revived by ideal initiation. Echoes in the deserted halls of the "Holy Office," twilight shadows flickering on the arena of the Coliseum, the wailing of the wind in the galleries of the Mammertine prison, become vocal and take shape from recollection, still we know these for what they are, illusions of the eye and ear whose source is within ourselves. Yet there is one point of view from which these concommitant superstitions and precautions may be regarded, that makes them appear to us with a peculiarly horrible aspect. The universal belief that magical practices were possible, and the general conviction that those who were punished for them had been justly condemned, must not only have originated a wide-spread apprehension that each one might himself become the victim of diabolical arts, but also in some cases, an assurance that such indeed was the fact. None except those who have really studied nervous epidemics can appreciate the futility of the usual means employed to arrest their progress, or the inefficacy of ordinary reason to prevent contagion. If it be denied that a sane man can ever suppose himself to be what he is not, imagine that he has acted when he was in reality passive, or conceive that he has observed what it was impossible for him to have seen, such a denial must come from those who know little of the capacity of the untrained mind for self-deception, the tricks of memory, or the unreliability of the evidence often furnished by the senses. Whoever has observed a confused and terrified child confess faults of which it was innocent, mistake its fancies for facts, and actually doubt its personal identity under different circumstances, has had as good an illustration as can be given of the phenomena referred to. Nothing less than the creative power of genius can give to the conjoined fragments of a by-gone age the semblance of its former life, but enough has been said about the structure of the mind and the functions of the brain to show that many a man must have been done to death as an associate of Satan whose earthly agonies were intensified by the anticipation of those which he believed were to be eternal; and, knowing this, we can understand the ravings of delirious remorse that the horror-struck listeners by the cells of the condemned frequently overheard, their obstinate rejection of the sacraments, and their blasphemies at the stake. At the time, these were regarded as unquestionable evidences of guilt; to us they are sad suggestions of the misery that they must have endured.

Thus far the part taken by the church in this persecution has alone been spoken of, but it was not only Inquisitors who were persecutors. Lay judges put in force the statutes against sorcery as readily as clerical ones, and civil tribunals were as active in their prosecutions as ecclesiastical courts. Everywhere, from Naples to Stockholm, and from London to Prague, cases of witchcraft were being tried, and armies of witnesses were, for the most part unconsciously, perjuring themselves in all the languages of Europe. Physicians accustomed to the symptoms of nervous disease, and lawyers trained to the analysis of evidence, could see no flaws in the proof. Bishops, and princes, and philosophers, and savants, recognized no antecedent improbability in the charge; and if the process by which truth is legally established,—if testimony alone can be relied upon to substantiate fact, then magic was a reality and not a delusion, for few, if any, of our most indubitable beliefs are nearly so well authenticated as this.

How came this monstrous illusion to be abandoned? Not certainly through the force of argument, or by any demonstration of its falsity. The Reformation left it untouched, and Luther and Calvin accepted it as fully as Bodin and Sprenger. It disappeared in the only way that superstitions can disappear; the human intellect outgrew it. No faith is ever destroyed,—it dies a natural death. Gradually and silently, one by one, its declarations become inaudible and cease, its denunciations are disregarded, its promises forgotten.

Those truths which are mighty and which prevail, rise slowly, like the stars, and like them are revealed by the motion of the world. In this movement the mind takes part; and as our sphere no longer occupies its former position in space, so the intellect, in obedience to the laws that govern its evolution, has passed beyond the control of those dark powers that once enthralled it. Shall we look backward with regret or forward with hope?

A TRUE ORDER OF STUDIES IN PRIMARY INSTRUCTION AND THE PROPER TIME FOR EACH.

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[Continued from last Number.]

READING.

To teach reading naturally every lesson that is given to a beginner must be an object-lesson, and every lesson that is ever given must be a language-lesson as well. An older person can readily imagine the object he is to read about, but a child wants the object or its representation before him. Therefore, when a reading-lesson is to be given an object should be presented which the child can see, think about, talk about, and read about.

Suppose the first lesson is to contain the word "nest." A real nest should be provided for the children to see and touch and talk about. A child is directed to look at the nest, and the question is asked, "What do you see?" The sentence is at once obtained, "I see a nest." The child is told that he may read just what he has said, and the teacher writes on the board the sentence, "I see a nest." This sentence is read several times, and even in the first lesson some one word is selected and remembered, as the word "nest." After the second lesson on that sentence,—and in that time all the words should be remembered separately,—a new word may be added and the sentence formed, "I see a pretty nest," or, "I see a small nest." Or the object in the sentence may be changed, and the child reads, "I see a book." Several new words may be taught in this way, as boy, girl, cat, dog, etc., and then the subject and verb may be changed.

By thus using objects this subject is taught in a natural manner, the mind is appealed to through the faculty of perception; and as a sentence is a unit of expression, it is as readily comprehended as a single word would be, and more readily than an abstract letter could be. Following this plan, a sentence is taught first, next the words of the sentence, after that the sounds in the words, and last of all the letters, which are but the arbitrary representations of those sounds. After the first two or three lessons have been given, the reading lessons should be followed by an exercise in writing a portion of the reading-lesson.

Experience has proved to many, at least, that it is advisable to begin with the reading of the printed characters instead of the script, because books are printed, not written; and for a similar reason it is desirable in the beginning to train the hand to the formation of the script character.

Against the seeming objection that this way of working presents two difficulties at a time, the *fact* stands that of two classes beginning school at the same time, one being taught to read print and to print on their slates, the other to read print and to write on their slates, the latter made just as good progress in reading as the former, and in addition were better writers,—writing so well that at the end of sixteen weeks they were able to take a little reader and write one of the lessons from it on their slates without a copy or any help whatever. A whole word should be written at a time, not a single letter. The writing should be done on slates ruled for the prrpose, so that in the beginning the children learn the correct height of the letters.

Phonic Analysis.—When reading-lessons have been given for four weeks, work in phonic analysis should begin. Simple words should be taken first, and as soon as the class is familiar with the sounds, all new words should be analyzed in the same lesson or in the succeeding one. This phonic analysis aids in securing distinct enunciation, and although our English spelling is not entirely, or even largely, phonic spelling, yet phonic spelling is after all the best means yet discovered in aiding to accomplish the difficult feat of spelling correctly. The letters of the alphabet should be taught incidentally during the first year.

The writing-lesson which follows the reading-lesson should have about the same lengh of time as the reading-lesson itself.

After the first year the work in reading will gradually lose its objective character, but the meaning of all new words should be taught, and these words should be written on the board by the teacher and spelled and pronounced by the class before attempting to read a lesson for the story. A child should never be allowed to read a piece to bring out the meaning until the teacher is, at least, reasonably sure that there is no word in the lesson that will prove a stumbling-block. Children should be trained to read promptly at sight; for this purpose a generous amount of reading-matter is necessary.

During the three years remaining in the primary school, readers of a suitable grade are recommended, together with as much supplementary reading-matter as can be judiciously introduced; but whatever is attempted should be thoroughly done. When a lesson in reading s finished, an abstract of the lesson should be required from the class; this abstract may be oral, or written, or both. The oral part of this work may be done in a very few minutes if questions are asked properly. Time should be allowed for this, as an important part of the lesson, for it is an excellent way to cultivate the use of good language. A written abstract of a reading-lesson is a foundation for future work in composition. If this work is done thoroughly, the proper amount of reading-matter furnished, all incorrect expressions corrected when they are made, a clear enunciation and natural expression persistently required and obtained, there is no reason why the graduates of primary schools should not be able to read and speak correctly.

WRITING.

As soon as a child has learned the letters of the alphabet, the writing of each letter should be carefully taught. The first half of the second year may be devoted to the small letters, beginning with the more simple ones, as *i*, *u*, *w*, *v*, etc., and then taking the more difficult ones. The last half of this year should be devoted to the capital letters. Fifteen minutes each day should be devoted to writing, proper, aside from the time given to written reproductions of other lessons.

During the third and fourth years this work should be done with pen, ink, and paper, and to make good writers an abundance of paper is far more necessary than a clean copy-book. In this, indeed, it is only "practice that makes perfect," but by a careful analysis of each letter and by comparing letters which are incorrectly made with a perfect letter, ideas of form and symmetry will be developed, and children will soon learn to appreciate the use and beauty of good handwriting.

At this time, also, in connection with regular work in writing and spelling, children should be taught how to write and address notes, letters, etc.; also, how to make out a bill. This last work must, of necessity, come toward the close of the fourth year.

SPELLING.

After the first year spelling should be taught by letter as well as by sound. Words from a reading-lesson, an object-lesson, or names of any common objects may furnish the matter for these lessons. These words should always be obtained from the children, and spelled by sound before being placed upon the board. The words should then be spelled by letter and learned and reproduced upon slates, either from memory or dictation. Very early in this work considerable language-work may be done by having the children write sentences containing the words in the lesson. Usually the children should construct these sentences themselves, but an occasional lesson in dictation is good drill.

Now as our spelling is not entirely phonic, it is well here to present some of its peculiarities and difficulties; this can be done without teaching any rules. As soon as children begin to spell by letter, after having spelled by sound, they will discover that some words contain letters which have no sound. When this fact is discovered, several lessons should be given on words containing silent letters, and the term silent should be applied to such letters. The words which are taught in these lessons should be common ones that can be obtained from the children by questioning. These words should be spelled first by sound, then by letter, after which the children should be led to select and name the silent letters. When a sufficient number of words have been written on the board the heading or subject of the lesson should be obtained from the children, and written over the words, as in the following lesson:

Words containing silent **e.**	
Blue,	**Home,**
Tame,	**Name.**

The heading of the lesson should be the last thing placed on the board in order that the children may generalize for themselves.

During this year similar lessons should be given on words containing the long and short sounds of the vowels represented by those vowels only, and in such words these sounds should be recognized and named, as—long sound of *a*, short sound of *a*, etc. Similar lessons should be given on words containing two or more initial or terminal consonants.

During the third year it is well to give lessons in which all these different vowel sounds may be recognized and named,—as, long sound of *a*, short sound of *a*, broad sound of *a*, etc. The mark which indicates these several sounds should also be taught. It is not necessary to use the term vowel and consonant in giving these lessons if a teacher prefers not doing it. The different vowels which represent the same sound may be taught in this connection, and is a great help in future spelling. The various letters which represent the same sound should be taught separately and reviewed together before taking a new sound; thus, the long sound of *a* is represented by *a*, *ai*, *ay*, *ea*, *ei*, *ey*, etc. One of these representatives should furnish the matter for a single lesson, and the children should state that in these words the long sound of *a* is represented by certain letters, as:

Long Sound of a *represented by* ai.	
Paint,	Rainy,
Drain,	Fainted.

In this, as in the other cases, the children should be led to distinguish the sound and its representative; and the last thing in the development work of the lesson should be the heading. This work may be varied by introducing some miscellaneous spelling-lessons, such as the names of the days of the week, the months, names of seasons, names of holidays, names of occupations, etc.,—whatever the necessity of the class and the ingenuity of the teacher can suggest. Each lesson should be followed by a written reproduction, and all mistakes should be corrected as soon as possible.

During the fourth year the spelling work should consist of dictation exercises, letter writing, and drill on words from other lessons. Before leaving a primary school a child should be taught how to write a letter correctly. A part of this can be done in regular writing-lessons. The remainder should be done in connection with spelling. Work of this kind should be given frequently. A child learns by practice. It is a good plan to have a portion of the reading-lesson copied, and attention called to capitals and punctuation; this should be studied, and then erased and re-written from dictation; or, as was suggested previously, the hard words in a reading-lesson may furnish material for a spelling-lesson, and the next spelling-lesson may be an abstract of the same reading-lesson containing the story in the child's own words. To be beneficial this work must be done carefully and thoroughly. But it is the natural way of learning to use language, therefore it must be the true way. In this everyday world of ours it is much more important that a child should know how to pronounce the word *February* correctly, also how to spell the word and begin it with a capital letter, than to have him able to state that it is a proper noun, third person, singular number, etc.

Teach first, the *art of language* and the *science* will take care of itself in its own good time.

ARITHMETIC.

Of equal importance with the subjects just considered is the subject of arithmetic,—the science of numbers. In this subject there is a greater exercise of mental power than in any other. It is also one of the best means of awakening the intelligence. Yet considering the time which is devoted to the study of arithmetic in our common schools there is probably no subject which shows as poor results. It is universally admitted that mathematics is the test of mind, that a faculty of dealing readily with figures is a gift given to some and withheld from others. But any ordinary mind must be able to grasp the fundamental ideas of arithmetic even if all cannot become good mathematicians; just as all may become fair readers, though the gift of oratory is only for the favored few. In regard to text-books, those generally considered fit for a primary grade will do fairly well as reading-books but are worthless as arithmetics. Those intended for later use are too scientific for the little ones. There has been too much of an attempt at cramming these little minds. The work of learning must be slow in the beginning. "The true end of intellectual education is the attainment of mental power, after which comes its application to practical and scientific purposes; and that plan of early education which dwells long on first principles and does not make haste to make learned is most economical, because most effectual." You may attempt to pour a quart of liquid into a thimble; the thimble becomes full but the rest is lost; so, into these little minds which can contain but one idea it is useless to attempt to cram a dozen; one is retained, the other eleven are lost. The child may become discouraged, but it will not become learned.

Here, again, we look to Nature. The baby began the study of arithmetic when it said, "Two hands." But the baby said, "Two *hands*," not, *two*. Many poor people who can neither read nor write, and who have no knowledge of the science of arithmetic, have a very definite idea of the value of numbers as applied to money, and cannot be readily deceived in regard to the amount due them even when compelled to make their own calculations. The baby got his idea of two from the object; the poor person gets his idea of the value of money from the coin itself. It was by arranging miniature soldiers on the floor of his room that Napoleon planned the arrangement of his forces on the battle-field. It is the *object* seen through the eye that makes the most vivid impression on the mind, and arithmetic considered in the natural way is a series of object-lessons on numbers. Not that perception is the only faculty of the mind that is exercised, but that it is the help to all others. This work must be done slowly, and step by step, if it is done thoroughly. If any one doubts the necessity of objects in this work, an observation of a number-lesson in almost any primary school will convince him that to the average child *fingers* are of more use than *figures*.

In the attempt to gain more natural and satisfactory results in this branch of knowledge, Grübe seemed to have reached the true idea when he said, "To know a number really, means to know it also in its most simple relations to those numbers which are smaller than itself." According to his idea, then, to make this work thorough each number should be considered in all its relations to those numbers which are smaller than itself before a higher number is taken. Thus in learning the number *two* a child should know all about *two* before taking *three*.

With numbers, practically speaking, but two things can be done; they can be increased or diminished: the idea of one naturally follows that of the other, so that multiplication, which is but a short process of addition, and division, which is but a short process of subtraction, should be taught with addition and subtraction, thus keeping all fundamental ideas of arithmetic connected in the mind as they naturally are.

A child who can say, "One marble and one marble are two marbles," can say, just as readily, "I can take one marble from two marbles and have one marble left. If a child is made to see, to know, and to say that, "One apple and one apple and one apple and one apple are four apples," "Two apples and two apples are four apples," "Three apples and one apple are four apples," "Three apples taken from four apples leave one apple," "Two apples taken from four apples leave two apples," "One apple from four apples leaves three apples," "Two apples and one apple from four apples leave one apple," "Two times two apples are four apples," "Two apples can be taken from four apples two times," "Three apples can be taken from four apples once and one apple will remain," "One apple is one-fourth of four apples," "Two apples are one-half of four apples," "Three apples are three-fourths of four apples," etc., and is made to apply the same thing to different objects and the same number is considered for several lessons, it will no longer be necessary for a teacher to hear a class say on one day that, "Two and two are four," and the next day learn that, "Two and two are five, or seven, or nine," and finally be obliged to tell them to count their fingers in order to be sure that no answer given is a correct one. Not that fingers are not well enough in their places, but a number that is *learned* must be a fact in the child's mind above and beyond all question, and until it is learned in all its relations it is not a fact.

To accomplish this end the first work in arithmetic should be entirely with objects,—with balls on a frame, pebbles, crayon, books, marks, etc. The mind should be trained to grasp the full idea of the value of numbers by observation on them as illustrated in these familiar objects, and when by this process the abstract idea is acquired, the arbitrary symbol should be given.

In this way the children themselves will eventually form rules from the very examples upon which their minds have been exercised, and will in this way build up their own science of arithmetic instead of trying to analyze that science, which, contrary to nature, *comes down* from above instead of *up* from below. In the following plan of work Grübe's method is used in part.

To some this minute work may seem wearisome and useless, and to a careless teacher it is so, just as any good plan is. But those who know the difficulty of acquiring thoroughness in this branch will be willing to carry it out. In regard to the detailed following of this work in the latter part of the course a teacher must use her own judgment. Classes differ in ability and more of the particular work will be necessary for some classes than for others, but all must begin at the beginning.

The first lesson must of course be on the number *one*. In this, about the only thing that can be done is to drill on the use of the word in answer to the question, "How many?" No work in subtraction of one from one should be attempted. The idea of *something* is more necessary than the idea of *nothing*. With the number *two* the work really begins. Work on this number should occupy two or three lessons. The children should be led to state that, "One mark and one mark are two marks," "One mark from two marks leaves one mark," "Two times one mark are two marks," "One mark can be taken from two marks two times, "Two marks can be taken from two marks once," and that "One mark is one-half of two marks." Here all ideas underlying addition, subtraction, multiplication, and division have been developed with one number, and that number has been thoroughly learned. This work should be done with several objects, not using figures at all, and for correctness of idea and expression the concrete form of expression should always be used in the beginning as, one apple and one apple are two apples,—not one and one are two.

During the first year, work of this kind should be done with every number as far as ten, which is the first natural stopping-place. As many lessons should be given on each number as is necessary in order to have the number thoroughly learned. These lessons should be afterward reproduced on slates, using marks to represent the numbers. In every lesson questions should be asked which call for the exercise of conception and reason, as, "If I had 5 cents and gave you 3 cents, how many cents would I then have?" A complete answer should always be insisted on in this early stage of the work, as " You would then have two cents." The simple answer 'Two," or "Two cents" should not be accepted at this time for it is quite as necessary to train children to speak correctly as it is to train them to think correctly. When work of this kind has been continued as far as the number *ten*, the children should be given the reason for using figures and should be taught to make the figures. The work on each number should be reviewed as its representative character is taught, and the sign of the different operations should be taught as is necessary in the work, so that children can read expressions like the following: $2 + 2 = 4$, $4 - 2 = 2$, 2 is ½ of 4, etc.

This work will occupy the first year. A lesson of twenty minutes should have the same length of time for reproduction. The work with objects should not be discarded here, but should be continued as far as practical throughout the entire primary course.

The second year the work should be carried on in a similar way with numbers from ten to one hundred; one hundred being the next natural stopping-place. The character representing the number should now be taught with the number itself. It is now necessary to develop the local value of figures as distinguished from their absolute value. In developing the idea of numbers as far as one hundred with visible objects, the number *ten* should be employed as a means of classification and as a help both to the eye and to the mind in the comprehension of higher numbers. At this time, after teaching the number *ten*, it is well to omit its numerical expression until *eleven*. *twelve*, and *thirteen* have been considered and their expression in figures taught, for the reason that it is easier to develop the idea of a significant figure in units-place than of zero. The children should be led to see and to state that eleven consists of one ten and one unit; twelve consists of one ten and two units; thirteen consists of one ten and three units. When the children understand this they will readily see the reason for writing one in tens-place and zero in units-place to express the number 10.

Operations in addition, subtraction, multiplication, and division should be taught with each number the same as before; as the numbers increase greater variety in drill can be introduced. Work similar to the following may be given: $(2 \times 6) + (4 \times 5) \div 8 = ?$ Regular tables in multiplication and division should be formed as soon as numbers have been considered as far as one hundred. Each number should be used practically as soon as it is learned and much variety can be introduced in this way. The consideration of different coins of money under their respective numbers, the number of days in a week or month; the number of months in the year; the number of ones in a dozen, etc. Too much of this work in practical application cannot be given, for in life there is no arithmetic but the practical, and the earlier the children becomer accustomed to the different forms of problems the better. As a rule, pupils in the higher grade of schools find more trouble in getting at the meaning of the words in a problem than in the mechanical handling of the number. Therefore this work is important in the primary grade, and without it many opportunities of cultivating originality of thought are lost.

It was stated in the beginning that to know a number really meant to know it also in its most simple relations to those numbers which are smaller than itself. But it is only the number itself, and its relations to those numbers, which are smaller than itself that are to be considered. That is, in considering the number 10 it is compared with all numbers below 10, but all addition of tens or multiplications with ten as a factor, and any work which necessitates a knowledge of any numbers greater than ten must be omitted until the higher numbers have been learned.

During the second year this work in addition, subtraction, multiplication, and division, does not necessarily include the teaching of the mechanical arrangement of the numbers which is necessary in written arithmetic; in adding 20 + 20 the children should say, 2 tens and 2 tens are 4 tens or forty. Work with numbers as far as 100 is fully enough to occupy the second year of school. This allows half an hour for oral work and half an hour for written work each day. When a child has learned the value of numbers as far as one hundred and the relations of those numbers and the operations on them, he has learned practically the relations of all numbers, for the relations of large numbers to each other are the same as the relations of their elements.

The number-work in the third year should include the consideration of numbers as far as one million. The lessons proceed on a plan similar to that used in the two preceding years but the work necessarily loses much of its objective character, and appeals directly to memory and reason. In dealing with large numbers the reasoning must, of course, be done by analogy. If the elementary work is thoroughly done, the work with large numbers can be done very rapidly. Numbers as far as one million should be completed in the first half of the third year. Written work should always be combined with oral, and practical problems should be given every day. The remainder of the third year should be devoted to teaching, objectively, such common and important denominate tables as have not already been taught in object-lessons; that is, tables of money, weight, measures, and time. Simple reductions under each of these can be easily given, as, "How many quarts in three pints?" "How many weeks in thirty days?" etc.

The entire fourth year should be devoted to practical work, both oral and written, in addition, subtraction, multiplication, and division. The usual definitions should be taught and proper analyses required for all operations. If the work of the previous years is carried out as it should be, there is no difficulty in accomplishing this amount of work in the fourth year. This work that is done here must be done once and for all; not so done that it must be reviewed every year in the grammar school in order to make thorough scholars. During the fourth year the proper expression for dollars and cents should be taught and problems should be given which will necessitate the use of these expressions. During this year a text-book should be introduced, but used judiciously. We would give, then, as the order of work in arithmetic for a primary course:

First Year, Object-lessons on numbers from one to ten, teaching all relations of those numbers, using objects first and figures afterward, and applying each number practically as soon as it is learned.

Second Year, Similar work with numbers from ten to one hundred.

Third Year, Less objective and more rapid work with numbers from one hundred to one million. Denominate tables and simple reductions under the same.

Fourth Year, Numeration, addition, subtraction, multiplication, and division, simple concise definitions and analyses.

Each lesson in arithmetic, as well as each lesson in any subject, must be a language-lesson also. This is absolutely necessary to correct teaching. In this subject, unless for an occasional lesson in rapid drill, the children should be required to answer in complete sentences, to speak clearly, distinctly, and to express their ideas concisely. As long as the language for the number is not perfect the knowledge of the number is defective. An example is not finished when the result has been obtained, but only when it has been obtained in the right way. A lengthy explanation should not be required, for in that case it too often happens that in the multiplication of *words*, *ideas* are lost, and one extreme is as bad as the other. But language is the only means a teacher has of ascertaining whether the child has mastered the subject or not. If a child requires help it should be given by means of *proper* questions,—not questions that will tell him half of the answer he is expected to give, but questions that will start his thoughts in the right direction and lead him out of the maze of perplexity where *reason* is not strong enough to see the way clear. A teacher who understands the art of questioning is never afraid of helping a child too much in this way. It is the only way to help him to help himself, and "What is the teacher for but to teach?"

The principal points which have been kept in view in the above order of studies are the laws of nature in regard to the development of a child's mind and the necessities of children in primary schools. Some subjects have been omitted which are usually given in a course of study. These subjects have been omitted for the reason that work can be done more thoroughly with a few subjects than with many. "Whatever is worth doing at all is worth doing well," and if too many subjects are introduced the work is not done well because it is not thoroughly done. And as stated at the outset, the aim of this work should be to do all that is possible in fitting the average boy and girl, morally, mentally, and physically for the requirements of everyday life. In the miscellaneous lessons, subjects are introduced which will cultivate a love of the true and the beautiful, but the work is none the less thoroughly done. Variety is introduced, and the importance of this variety cannot be over-estimated. No matter how pleasant a subject is, children will become tired of it, but a lively interest can be kept up by changing the subjects in the manner indicated. These lessons are also a direct help in reading, writing, spelling, and arithmetic.

The subject of drawing has been considered only in connection with lessons in form. Drawing is the natural outgrowth and the practical application of these lessons, and should be taught in connection with them. The time has come when a knowledge of the elements of drawing is very important. But if the work is properly planned and managed all the drawing that is necessary in a primary school can be done in connection with miscellaneous lessons.

In the regular course music was omitted also. Not that we consider any school complete without music, for we do not. School exercises should begin and end with singing. Any teacher knows the good moral influence, rest, and recreation which are derived from music. But all this pleasure and benefit are independent of any knowledge which the children possess of the theory of music. Music, in a primary school, should be taught on a plan similar to that followed in teaching language. Vocal culture, and the training of the ear, should precede a knowledge of notes and of the science of music, just as in language we teach the child to talk but keep the rules of grammar for by-and-by. Their little songs may be some of the finest airs that were ever written; the finer the better, but rote-singing is enough to attempt in a primary school.

A more extended knowledge of music and drawing than has been here recommended is very well if it were equally safe to recommend it. But the advisability of putting music and drawing on the daily program of a primary school as subjects of equal importance with reading and writing is, at least, questionable.

Physical exercises should be given regularly. These will improve and rest the children and give opportunity for a change of air. These exercises should be pleasant ones, such as children can and will enjoy, and such as will give the school a good appearance. Good language, good manners, and good morals should be a part of every lesson, and should be constantly practised by both teacher and pupils. These, none are too low to appreciate and none too elevated to practice; and these, beyond all other things should be a part of a primary education. It is only in this way that harmony of feeling can be secured and true education made possible, for true education has to do with the heart as well as with the head and hand.

We said in the beginning that the first necessary element in a true order of studies was a true teacher. It is no small responsibility to take the care of a school of little children even for a few hours a day. They who know what real instruction is know also that there is no more difficult teaching in the world than to teach a little child to read. Then, if these children were all bright, clean, and lovable it would be charming work after all; but many of them are not interesting, not even clean and wholesome in appearance, and with very few ideas of good manners; yet the greater their need, so much greater is the teacher's responsibility. Michael Angelo, in his artist soul, saw the angel even in the unhewn marble, and longed to set it free. In like manner the true teacher must see in each little one the Master's image in the great gifts of memory, free-will, and understanding, and must do all in her power to train these faculties in the right direction. A fault of omission here is quite as great as a fault committed. Not only must the wrong be remedied but principles of right must be inculcated.

Our colleges are very important, and our country is and may well be proud of its old and honored institutions of learning. Their professors are selected with care and are regarded as learned and able men. But very little is said about our primary schools and less about the primary teachers; yet who can say that the influence of the primary teacher is not wider than that of any college professor in the land? Her influence reaches a far greater number, and be that influence what it may, it can only be measured by Him who knows "what earth needs from earth's lowest creature," for

> "No star ever
> Rose and set without influence somewhere;
> No stream from its source
> Flows seaward, how lonely soever its course,
> But what some land is gladdened.
> No life
> Can be pure in its purpose
> And strong in its strife,
> And all life not be purer and stronger thereby."

THE PRONUNCIATION OF LATIN.

BY SAMUEL THURBER.

"Ex quo mihi inter virtutes grammatici habebitur aliqua nescire."—*Quintilian.*

It is interesting to note that in the universities and gymnasia of Germany the pronunciation of Latin generally continues to be the traditional one. The Germans themselves do not seem to live up to the light which they are discovering and imparting to the world. This conservatism in practice, existing side by side with great energy in research, may perhaps be partly explained by the fact that the custom of Latin speech is more general among the Germans than with us, and that thus a more deeply-rooted habit has been formed from which it is harder to break away. But I imagine that the apparent anomaly is not thus quite explained. The Germans do not cultivate the study of Latin sounds for practical ends. They have not in view the formation of an art of Latin pronunciation. They are at work at the science of Latin archæology in all its departments, and show, therefore, the zeal of investigators, but not the haste of reformers. Thus their pedagogy preserves the even tenor of its way, while their activity in all departments of philology keeps the world of scholars in their debt.

The study of Latin phonology seems to have a special fascination for American teachers, doubtless for the very reason that it seemed to furnish the data for a new departure in practice. But this special branch of archaic research has not been thus specially cultivated in Germany. In fact, the whole archæological field is so wide that this little department of it is relatively unimportant. There is much doing, and yet to be done, in ancient art, law, government, literature, and many other fields, as well as in phonetics. But because we are compelled every day to utter Latin words in some form or other, we are constantly held up to the phonetic question, and are forced to take sides on it either as progressives or conservatives. No such constraint holds us to the study of ancient law, ancient religion, and ancient civil administration. But I venture the opinion that the literatures of these departments are far richer in themselves and far better digested for our use, and that they touch our work as teachers of Cicero and Vergil at a greater number of important points than do phonetics and rhythmics combined.

The publication by a great university of a request to teachers to pronounce Latin in a certain way, lent to this pronunciation an advantage of prescription which interfered with an estimation of its value as a scientific finality. No German university or professor can be conceived as doing this. Certainly the body of German teachers cannot be conceived as altering the fashion of their pronunciation on such an invitation. The man who is both a trained pedagogue and a trained scholar,—and, speaking generally, it may be said that such is the type of the German gymnasial teacher,—scrupulously guards his pedagogy against undue influence from his speculations as an investigator. For instance, with regard to Latin sounds, the teacher, as scientist, simply aims to know how the Romans spoke at given times and in given places. But as teacher, facing the question how he shall train his boys and girls to pronounce their Latin, he must decide on grounds of pedagogy. His first qualification as a teacher is a recognition of the principles of his art and skill in applying them in practice. Better by far to have but little knowledge of phonetics than to mingle unwisely any knowledge of phonetics in one's methods. A class of teachers sure of their art, its principles and its practice, would have received the invitation of Harvard College to change their pronunciation of Latin as a first overture and suggestion to themselves to consider what, in view of all the circumstances and limitations of the case, best known to themselves, would be the bearings upon their own methods, processes, and results of a full acceptance of the invitation. When certain conclusions concerning Latin sounds are given to teachers in the form of rules to govern their practice, the teachers should ask,—Is this all; is this final; can you give us the information needed to enable us to use the rules?

When, eleven years ago, fresh from a too cursory study of Corssen, I read a paper on this subject, I conceived the question of Latin phonology as a very simple matter. The new pronunciation seemed easy, and settled forever. The rules for it,—as it about that time began to figure in the grammars,—were much briefer and simpler than the rules for the old pronunciation; so that I even fancied that in discarding the old and adopting the new we should not only attain phonetic truth in our practice, but should even relieve ourselves of a considerable burden. My opinions on the question at present are much more temperate. Phonetic truth still, on the whole, eludes our grasp, though portions of it seem to have been caught and secured against dispute; and the burden and difficulty no longer seem to me wholly on the side of the old pronunciation.

The distinction between the quantity of the vowel and the quantity of the syllable has always been insisted on by grammarians. The elder Vossius, two centuries or more ago, describes it with reference to vowels in position as clearly as it has been done by any phonologist within the last decade. Only the importation of it into pedagogy is novel and recent. The subject is an intensely interesting one to study, as all who have read Ritschl's article in the *Rheinisches Museum* of 1876 well know.

The question, as it confronts the pedagogue to-day, is as follows: Every vowel in Latin is two, just as in Greek ο and ω, ε and η are two. But the Romans used only single characters for both the short vowel and the long; and the distinguishing marks which, in early times, they employed went out of fashion so soon that they have not come down to us except in the comparatively small number of cases where they have been preserved in inscriptions. Thus, where verse fails to inform us, as it always does in the case of vowels in position, we are left in ignorance of an element of the vowel absolutely indispensable to its true pronunciation. The philologists, indeed, by various shifts, which it is extremely interesting to follow, but which form no part whatever of any pedagogic question, are gradually picking up these lost quantities. Ritschl himself, indeed, whose article just cited is in the nature of an exhortation that we should respect all the quantities that we know, gives us no hope that they will all be recovered. There is no hope, even, that all such quantities in common words will be unearthed. The sources of such knowledge are precarious, vague, and illusory. Hence, perhaps, the very charm to the scientist of the pursuit. The chance of finding vowels cut in inscriptions a little longer than the contiguous letters, or of finding vowels doubled, or with an *apex* over them, or of being able to infer with certainty the quantity of the vowel from some cognate Greek or Sanscrit root, or from a Greek transcription, is, as Ritschl says, not to be counted on to supply us with all we need. Even when vowels are found in inscriptions, the apparent data are sometimes contradictory.

This is the natural and healthy condition of a *science.* Whether pedagogy can afford to have entangling alliances with a subject so inchoate, is the question. I do not mean merely to say that there is a fatal incongruity in devising some way for pronouncing decidedly the vowels whose quantities we know, and provisionally the vowels yet doubtful. I am thinking rather of this aspect of the matter,—that vowels having just the same form to the eye and just the same apparent relation to other letters, and bearing no distinctive marks except the conventional, modern, non-Roman long and short signs, and never revealing their character as to quantity, even in Ovid or Vergil, must be laboriously learned in different ways by beginners, without a single practical advantage, and with no advantage whatever except the fanciful one that we are making our Latin approximate, perhaps, the Roman sound.

A good illustration of the way in which the archæologist strives to bring to life again the vanished quantities of vowels in position is seen in Lachmann's attempt to make a rule for such vowels in the supine stems of verbs by means of deductions from certain statements of Aulus Gellius. Roby quotes this rule of Lachmann in a foot-note, and apparently marks certain quantities in his grammar in accordance with it. So, also, does Harkness, but with the further light derived from the articles above cited of Ritschl, and from other sources also. It is easy to go to Aulus Gellius and to judge for one's self how well-founded are Lachmann's deductions. Ritschl himself denies their validity. Lachmann's attempt to make a rule was a perfectly legitimate tentative in the interests of science. Altogether unprofessional would be the adoption of such a principle to govern the practice of classical teaching.

I will cite one more instance of the way in which the latent quantities are detected. According to Lachmann's rule, the *o* in *doctus*, participle of *dŏceo*, would be short, as the *i* in *dĭctus* and the *u* in *dŭctus*. But Schöll, a diligent investigator in this department, as cited by Ritschl, finds in Marcianus Capella, a grammarian of the end of the fifth century, an observation that may possibly be interpreted as settling the quantity of this vowel the other way. Capella shows that the adverb of *doctus*, namely *docte*, in which the final *e* is long, cannot for that reason be a properispome, but must be a paroxytone. This settles the *o* in *doctus* to be an *omega* and not an *omikron*.

Such are the sources from which our knowledge of the quantity of vowels in position must largely be derived. It is our duty to weigh the value of such testimony before we venture to assume to know any quantities. But it is a more serious duty still to consider well how much such knowledge, even when it is most firmly substantiated, we have a right to include within the range of our teaching.

It is worth while to note that Ritschl, insisting on a recognition of established quantities, expresses himself as comparatively indifferent to some other points, which would seem to us all-important, as the sound of *c* and *t*. The scheme of so-called Roman pronunciation evidently does not shape itself in his mind as an organic unity. I think in this country the unvarying guttural sound of *c* would generally be regarded as one of the vital elements of the Roman pronunci ation. As to the sound of this letter in Latin, I believe that phonologists to-day are nearly agreed that in the classic period, and at least in the city, it was uniformly that of English *k*. The question when sibilation began, where it began, and in what class of people, is, however, still discussed. Wilhelm Neuman, in 1873, devoted a monograph of eighty pages to a collation of the evidence in the case, and concluded plumply not only that the Romans had not always pronouuced *skiskere, Kikero, deskendere, fakit*, etc., but that they never so pronounced. I cite this writer, not because of any special value attaching to his opinion, but simply to show that even in regard to the letter *c* the question of its sound is still open. This means merely that a scholar, in pure loyalty to the truth and to the method of science, and not at all as an obstructionist and a lover of darkness, may yet delay to change his habits of Latin pronunciation.

But to return to our vowels. Suppose we know whether they are long or short,—are we sure that we know what to do with this quantity? Are we competent to render it in actual speech? Do we know precisely *what* is long and *what* is short? That is, do we know the *nature* or the *quality* of the sound which is to be made long or short? Are we sure that the terms *long* and *short* mean strictly *more* and *less*, a greater continuance or a less continuance, of the same sound? For if we are going to reform our actual pronunciation, these are crucial questions. The old pronunciation of Latin was a convenient, or, if you will, an inconvenient, fiction. But if the new is founded on assumptions, is it not worse than the old? A work of fiction, pure and simple, is a good thing. But a historical romance that confusedly mingles history and fiction is a nuisance.

The most difficult sounds for a foreigner to utter in French and Italian are those of *e* and *o*. For these letters are as distinctly double in these languages as they are in Greek. The accents help in French, but Italian print leaves us as helpless as does Latin print. In English, of course, there are very many *e*'s and *o*'s. But the broad distinction of *open* and *close*,—to let alone finer shades,—which we know so well in modern languages, inevitably confronts us in Latin with a question that must be settled.

Roby prescribes for both long and short *e* and *o* the open sounds, the long being merely more protracted than the short. Harkness gives, in the case of *e*, the close sound for the long and the open sound for the short; and in the case of *o* the close sound for both, the long being merely more protracted than the short. The discrepancy between these two foremost authorities only illustrates the differences among the grammars generally. I need not quote more.

The differences simply prove that the historical sounds of these vowels are unknown. The writers of these books *assume* them. Usually they do not give the grounds of their assumptions. If the truth in regard to Latin sounds were all so clearly demonstrated that no candid scholar could possibly doubt a single element of it,—that is, if *science* had achieved its task in the matter, which, however, is not thinkable,—the pedagogic question would still be an open one.

Nor is the question between the open and close sounds of *e* and *o* unimportant. No student of French will allow for a moment that it is unimportant. We used to pronounce the Latin negative particle *nòn*. I hear it now pronouced *nôn*. Why this change? Is there any better ground for it than that it conforms to the prescription of some grammarian, like Harkness? It certainly violates the rules of other grammarians, like Roby. Is *nôn* longer than *nòn?* Time them and see. Doubtless the trouble is that certain prepossessions derived from the English dictionaries still dominate our thought in the matter. We have been accustomed, in dictionary and spelling-book, to see the sound of *o* in *not* marked and called short, and that of *o* in *note* marked and called long. But these are merely conventional names. It is great heedlessness to carry them into Latin phonetics and make them do duty there as identical with the Latin long and short. This is merely one of the *naif* anachronisms that persist in creeping into the semi-historical romance which our zealous reformers are constructing. *Nòn,*—open sound,—can be made as long as is desired; and *nôn,*—closed sound,—can be made as short as you will.

A very interesting attempt has been made within a year to settle on grounds of evidence the *nature* or *quality* of the vowel-sounds in Latin. If the attempt is really to be made to revive the Latin sounds, of course the *quale* no less than the *quantum* of the sounds in question must be determined. The monograph of Martin Schweisthal on the *Phonetic Values of the Latin Alphabet* appeared less than a year ago. It is an attempt to deduce the Latin sounds from the teachings of grammarians, some of whom make elaborate statements on the subject. These statements, sometimes in verse, are obscure and of uncertain authority. The difficulty of interpreting them is increased by the fact that the various writers seem not always to agree. But Schweisthal arrives at conclusions, and seems to have made a genuine contribution to Latin phonetics I will premise that he strongly desires to effect a reform in the pronunciation of Latin. Doubtless he would call his pronunciation "Roman;" but as it differs from other "Roman" pronunciations, it needs a distinguishing epithet, and may therefore be specified as the Schweisthal-Roman pronunciation. I can here only give his conclusions.

With regard the *o*, however, I must ask your forbearance while I give the process also:

> "The Greeks had two letters for *o*, *ὂ μιχρόν* and *ὦ μέγα.* The Latin grammarians, who imitated the Greeks as servilely as possible, naturally sought to introduce the same distinction into Latin grammar. Terentianus, after having established the existence of the two *o*'s corresponding to the two Greek letters, goes on in the following fashion: 'So when you shall wish to utter the sound of the lesser, hold your tongue pressed moderately back, and it will be enough for your lips to be open a not great space. But the longer one, wrought with lips rotund, sharpens its tragic sound beneath the lofty cave of the mouth.'
>
> "This explanation is adopted by several other writers. '*O* long,' says the commentary of Pompeius, 'resounds in the interior of the vault of the palate, but *o* short is pronounced with the tips of the lips.' And Servius adds, '*O* long is pronounced with the mouth wide open,—'*sublato ore,—Rōma;* while *o* short is pronounced with the lips,—*rŏsa.*"
>
> "We fear," I am still quoting Schweisthal, "that just a little bit of imagination entered into Terentian's description, and that the 'tragic sound' did not appreciably differ from the other except by accent and quantity. The two other grammarians have probably merely copied him, as often happens. For we know with what facility the ancients, both in the arts and in literature and grammar, appropriated each other's property. It was enough that a subtlety, or often even a manifest error, should be expressed by some writer of fame, for it to be religiously preserved and sometimes amplified by his disciples and imitators."
>
> "We oppose to these assertions another passage of Terentianus: '*ŏ* and *ō* seem to be neighbors to each other; the movements of their times differ, not the nativity of the sound.' This passage seems much more precise, much more worthy of confidence. Nevertheless, it seems that we may admit a shade of difference of pronunciation between the short and the long *o*. It is probable that the long was a little more open, inclining towards *a*, while *o* short, being close, pronounced with the extremities of the lips, was more akin to *ŭ*."

Having reached this conclusion, Schweisthal goes on to fortify it with other arguments, and really makes out a very strong case. According to Harkness, therefore, we should say *nôn*, to rhyme with *bone;* according to Schweisthal, *nòn*, to rhyme with *on;* with the former, *côgnôsco:* with the latter, *cògnòsco;* with the former, *ôs*, a bone; with the latter, the same: with the former, *ôs*, a mouth; with the latter, *òs:* with Harkness, *dôctus*, with Schweisthal, *dòctus*, if we believe this *o* to be long; if we believe it short, the two sounds are nearly alike. The yet remaining possible case, that we do not pretend to know the quantity of the *o*, is too dreadful to contemplate. With Harkness we should say *fŏdio, fŏdere, fŏdi ;* with Schweisthal, *fŏdio, fôdere, fŏdi.* With the supine our case is worse, for here we do not know the quantity of our *o*. We do not know the quantity, and should not know what to do with it if we did. This is *the* Roman pronounciation. In his choice of a key-word to represent the sound of short *o*, Harkness is singularly unfortunate. Like some other grammarians, he gives a word that has its *o* in an unaccented syllable, where it is obscure and uncertain. If any one thinks that the *o* in the word "obey" clearly conveys a sound that can be carried successfully into an accented syllable, as in *mŏnet*, let him note that scholars no less illustrious than A. Baskerville and Gustav Fischer, listening with trained ear to the pronunciation of English, fancy that they hear the same sound for the *o* in "obey," the *a* in "immediate," the *a* in "imperial," the first *e* in "precede," both the *u* and the *o* in "superior," etc., etc. This is absurd enough. I adduce it to illustrate the elusive, fugitive nature of unaccented sounds, and the futility of trying to convey sharp distinctions by means of them.

I do not understand how the grammars,—as, *e. g.*, Harkness,—reconcile their statements that "in theory the short vowels have the same sound as the corresponding long vowels, but occupy only half as much time in utterance," with their key-words, which frequently exhibit a difference of quality with perhaps no difference of quantity whatever. That scholars of repute should carry over into Latin not only the English words *long* and *short*, as they must, but the values also which these words have in English schemes of pronunciation, is incredible. Harkness gives the words "they" and "fate" as representing the long sound of *e*, and the word "met" as exhibiting the short sound. Schweisthal comes to precisely the same conclusions with regard to *e* as Harkness. But while Harkness reaches these conclusions by way of the theory that the long and the short are exactly alike except in duration, Schweisthal reaches it as an inference from the hypothesis that the sounds differ in their nature. Phonology is plainly not an exact science. The very meanings of the words "long" and "short" need settlement. But as to *e*, Schweisthal's position is by no means a mere hypothesis. He quotes the grammarians abundantly as saying, in the most explicit and unmistakable language, that long *e* sounds in one way and short *e* in another. Whence came into our rules for Latin sounds the assumption that the vowels differ, as to long and short, only in duration? Can the intricacies of Latin phonetics be solved in such an arbitrary way?

The letter *a*, according to Priscian, had, when short, four different sounds; and when long, six. Of course it transcends all imaginable phonetic subtlety to reproduce these sounds. But in view of such plain assertions by the ancients, how can any modern affirm that these differed not in the quality, but only in the duration, of the sound?

Even the vowel *i* was not, apparently, always of the same nature. Schweisthal's *résumé* of the evidence in regard to it is as follows: "When *i* is consonant it is pronounced like the German *j*, and is resolved between two vowels. When it is a vowel it has its ordinary sound, although in the Roman popular language *i* long often approximated the diphthong *ei*; and *i* short, the *e* called by the French *e moyen*."

Concerning thesound of the consonant *v*, Schweisthal, after a thorough sifting of the evidence, concludes, without misgiving, thus: "It is no longer possible to entertain a doubt as to the pronunciation of *v*, which in spite of Corssen's assertion is everywhere pronounced like the French *v*." As I do not by any means appear as an advocate of any "Roman" manner of pronouncing Latin, but am only trying to show the futility of calling any pronunciation whatever Roman, I cannot help recalling the very conclusive proofs by which it has been shown that *v must* have been an English *w*. Were it not that Latin words must, as an actual and present fact, be spoken by us when next we call a Latin class, and were it not that we have an ambition to be in all the new light and fully abreast of the times, we should be able perhaps to look disinterestedly upon this quarrel of the phonologists, as we do upon the speculations about the nebular theory,

I must speak of only one or two more letters, and bring this paper to a close. The diphthong *æ*, our author concludes, had the sound of the French *very open e; père, sexe.*

Final *m* Schweisthal would have us make nasal. To a French-speaking person this would be easy. That a final *m* before a vowel in verse creates hiatus seems reason enough for doing something about it, to make our phonetic scheme complete. The author gives some lines from Vergil and Horace, annotating them as he would have them read, and insisting that all the final *m*'s be nasalized. Will not some enterprising teacher adopt this new ornament? There is fully sufficient authority.

Whether final *d* was pronounced like *t* our author considers with great care and at unusual length. His conclusion is somewhat startling. The genuine Roman *d*, he maintains, had everywhere the value of the English *th* soft, as in *father*, *then*. In the other Latin dialects it was sounded like modern *d*. He nowhere allows it the sound of *t*.

My purpose in offering such a paper as this will not have been misunderstood. I have tried to show the very great difficulty of reconstituting *the* Roman pronunciation of Latin. I believe it to be impossible to command the assent of different investigators in Latin phonetics to any one scheme of pronunciation as an adequate reproduction of the sounds heard in Rome in the classical period. Some pronunciation different from the traditional English one might be devised that might receive the approval of many teachers. But such a pronunciation should seek a name for itself more honest than "Roman." When provided with a modest name, that should not impose upon simple and credulous people, such a pronunciation might ask to be heard as to the pedagogic advantages which it had to offer. And this would be the test of its merits, by which it should stand or fall, as a claimant for admission into schools. A wise pedagogy remains on its guard against wanton innovations. The new and untried applicants for admission to the schools are many. They should be strictly held to make good their claims, lest we commit the error of admitting them on pleas more specious than sound.

To count up the colleges and schools that have adopted something called the Roman pronunciation does not give us a better warrant that the pronunciation is Roman. Considering the diversity of opinion as to what *is* the Roman pronunciation, it is essential, when you hear that a college has adopted a pronunciation under that name, to know after all *whose* Roman pronunciation it is. How it pronounces *c*, *e*, *o*, *d*, *m*, *v*, still remains to be known. It is a matter of partisanship and personal preference. One teacher thinks he will trust the Harvard Catalogue and spare himself all further inquiry. Another will stand by this grammar or that, or will follow the example of this or that school. Another plants himself on the last results of German research; and as new last results come over from time to time, modifies his practice accordingly.

A teacher of English literature is confronted with the question, how he will pronounce Chaucer. He will be derelict, I submit, if he does not ascertain what Ellis has offered in the way of speculation as to what the fourteenth century pronunciation of English was. He will even make his recitations interesting by trying his own vocal organs on the Chaucerian sounds. But I should hope he would not call his interesting archaic elocution *Fourteenth-century English* without further qualification. Even if he knows as much as Ellis and all the Chaucer society, he does not know so much as that.

The attempt to *speak* Latin in the Ciceronian manner has but small pedagogic value. The attempt to *write* or *compose* Latin in the Ciceronian manner, on the contrary, has the very greatest pedagogic value. To reproduce the Latin sounds is analogous to reproducing Latin letters and Latin punctuation, as we see them in the inscriptions. These are the external, physical, unessential elements; so is the form of speech, in the phonic sense, a physical, external, unessential element, within the range of the modern uses of Latin. The Ciceronian *style* is internal, essential, spiritual. To this the pedagogy of centuries has paid homage. To study this is to study humanity itself. But any modern revival of the Latin sounds must be mere bric-à-brac; and that, too, not good bric-à-brac, like vases, coins, and figurines, but of doubtful authenticity.

For myself, I am very exacting about the pronunciation of French. For close at hand are monsieur and madame, Littré, LeSaint, and the Academy. Here something positive and useful can be attained. On the sounds of French a much-needed training in phonetics can successfully be imparted. And here is the joy of acquisition, as every chance Frenchman whom the pupil meets enables him to feel. But as to Latin, my sole ambition is that the phonetic element of my method be simply such as to burden my pupils the least, whether that confessedly violates or pretendedly follows the sounds of the ancient Latin.

MOTHERS AS EDUCATORS.

BY MRS. D. H. H. GOODALE, BERKSHIRE CO., MASS.

II. — The Work.

What does the parent owe to the child? This question comes home with irresistible force to the thoughtful mother. It is a question which must be answered practically and without delay. It cannot be put off or laid aside; the deepest responsibility,—the highest rewards,—the severest condemnation,—the most terrible penalties are involved. Those whose philosophy has room for favorable views of humanity may well dwell upon the fact that, in a general way, we all wish to do well by our children. Even they who fail most disastrously are seldom wanting in good intentions. The present distribution of duties gives to the mother, in most cases, by far the larger share of personal contact, and therefore of opportunities of immediate usefulness to the child. Who can estimate the power of personal influence? The silent force of the mother's life; the mysterious capability which exists of feeding the hidden springs of the child's nature; the power she exerts over the "unconscious cerebration" which is to build up the very foundations of his character and influence as a man, and decide his value to his own day and generation; these are very real and sacred things. In the midst of active life men do not have time to brood over these questions as women must and do. In the round of home-life, in its quiet hours, its more sedentary occupations, the mother is continually dwelling upon them. She studies the slight but tell-tale indications which express the real dispositions and give a clue to the true needs of the child's nature. She sees each little idiosyncrasy; she shelters every sensitive seedling of virtuous and lovely growth; checks and seeks to uproot each poisonous weed. How peculiarly womanly is this quiet yet most important work,—this gentle yet most commanding influence. And is any wisdom, any insight, any largeness of view, too much for its daily guidance?

The serious question of the entire scheme of a boy's or girl's education seldom meets with the deliberate consideration and discussion to which it is entitled. With our American modes of thinking and extreme fluidity of circumstances, it is rarely decided upon at the outset, or as a whole. We live from hand to mouth, another year we may do better,—we shall see! In this land, where all employments are open, all trusts possible to every boy; where no bar exists to keep the way closed to any, however humbly born, who develops fitness for far-reaching work, the parent cannot resist the feeling that as there is scarcely any limit to the possible career of the child, so the best education is practically limitless. Nothing is farther from the wish of the average parent than that the child's future should be fixed by his training. There is, undoubtedly, a certain truth in this view, and at the same time the importance of a definite aim in education cannot be over-estimated. The spirit of a large and universal education may well be cultivated, but all the details must be positive. But ought not a condition so grand, so hopeful, to make men of a stature heretofore unknown? What fine and rich development ought we not to expect, to propose, for the boys and the girls who are to be the men and women of this all-possessing republic? What large views of life, what noble conceptions of free institutions and of social progress should be theirs! What wise and devoted statesmanship may we not expect; what universal humanity, honesty, and generosity! But, ah! the selfish tendencies of the human heart form a centripetal bond which will always keep the great body of men bound down to dull earth. There is small chance that the warm enthusiasm of woman, were woman much more powerful than she is, would ever outweigh the considerations of personal gains, personal safety, which will always hold back the rank and file of mankind from enterprises and designs too high or too ideal for the average comprehension and acceptation. It is chiefly in the line of material conquest and expansion that personal aggrandizement is to be found. It is, therefore, "a practical education" which is oftenest demanded. Into this channel some would turn the whole productive energy of the nation. The "practical education," the "fitting a boy for life," too often means giving him an exaggerated sense of the value of mere dexterity,—a conceit of "smartness"; contempt for men and things upon a plane infinitely above his own; a supreme devotion to money as the one essential thing, both for power and for pleasure; and a lack of moral fibre, the story of which may be read in the defalcations, the betrayal of trusts, the social scandals and tragedies of every newspaper one takes up. The desire for self-aggrandizement makes "dirty" politics; it is the cause of social ostentation, vulgarity, and meagerness; it brings upon us the corruption in high places which stains even the judicial ermine, and strikes at the very foundations of all true honor, in the base conceptions which it sets up both in Church and State. Shall we offer our children these stones in place of bread?

Within the limits of the parents' ability, the child may justly claim a right to the fullest opportunities of individual development which the combined wisdom of mankind offers. But in the paths of actual life, the parents who can see the largest possibilities of education are not too many; out of these, the proportion of those who can command the resources, in time and money, requisite to the most liberal advantages of technical education is small. Few men are able to give their sons, by eclectic privileges, the freedom of all the universities, or to put in their way the highest formative and professional opportunities of the world.

What can mothers do? Not this, indeed, in most cases; but perhaps something not less important. It is for the enlightened mother to nourish and preserve in sons and daughters their own birthright,—the impulse toward a broad, beneficent, and joyous life; the quick apprehension, the ready powers of assimilation, the generous will; it is for her to inculcate and strengthen the broad and right views of life, which shall give direction to all that the boy may himself gain. In truth, he gets his *own* best education. For us all, what we get from actual, responsible existence is worth vastly more than anything that we have simply taken at second-hand. It is attrition with the forces around us,—action and re-action,—of self and environment that matures character and power.

Do not parents sometimes seem to think that in providing schools "as good as they can afford" their responsibility ends? Delegated authority is never safe without supervision. Whenever work, and especially work of such delicacy and importance, is placed in the hands of others, common prudence dictates the most scrupulous oversight. What business-man would place money-matters of grave importance in the hands of an agent, and leave him entirely free and unquestioned in the exercise of his power? It is in matters of this character that woman's peculiar usefulness in public affairs may be shown, should she be placed in a position to bring her active influence to bear upon such questions. A highly educated woman will bring to moral questions which vitally concern the public good, the energy and strength of will which men are too apt to concentrate chiefly upon their own personal interests. The keen watchfulness and whole-hearted coöperation of parents would soon reform the abuses and correct the errors of the schools, and bring them to a degree of efficiency and excellence which teachers, unsustained and neglected, can never attain. The mother must not only be anxious for her child's school-welfare, but she must have an *intelligent knowledge* of what he is doing, and be able to compare it with a standard of her own.

How often the mother gives up her "accomplishments," her reading, her larger interests, such as they were in the somewhat crude and thoughtless years of her girlhood, and accepts as *duty* a lot which sinks her into a mere housewife. She thinks much of her children's health, of their palatable and wholesome food, of their pretty and becoming garments; but their minds, their souls, she turns over to their teachers, their pastors, and chance! What a fatal mistake! What a sad letting-down of the just relations of life! It seems to me that mothers, above all other men or women, need to keep in a *growing* condition. There is no more mistaken notion than the one that education can be *finished.* While life lasts, we are continually changing in mind and character. Either we go on building up, by the fruits of experience and thought, a richer and more fruitful personality, widening and deepening the sources of influence, and taking a stronger and stronger hold upon the things that make for our eternal peace; or, letting go that which we have already attained, and concentrating our whole attention upon things temporary and unessential, we harden more and more in a shell of dreary commonplace, and, grown "old and formal, fitted to a petty part," we become every year less capable of independent judgment, or of generous and high-minded action. Who can estimate the value to a child, of watchful care such as we have hinted at, exercised over his whole education and training? He brings every new intellectual gain, every fresh subject of interest, to one able to point out its just value, sure to sympathize and to share or to compare views and discuss bearings. What confidence is gained, what freedom in the use of mental acquisitions, and how heart is knit to heart by these close bonds of mutual interchange! The mother is never "old-fashioned" who keeps her sympathies warm with the new movements, the higher aspirations, the varying hopes of the next generation. The wisdom of her experience is never mouldy, in the fresh air of this new life. How secure is such a mother in her children! What delight she has in their victories, what joy in their happiness, what serene faith in their sorrows, what proud confidence in their adversities! Ah, can she ever grow old? Let who will build for fame, for riches, for personal advancement; we build for God and for the best interests of human life.

We have considered what the mother *must* do; let us look, also, at what she *may* do. Sometimes, from force of circumstances or of free choice, she decides to attempt a course of home-education, quite independent of the schools. In this attempt nothing will help her more than to form a clear idea of what she means to undertake, and to map out her work definitely. Next, she must be inexorable in making all other engagements give way to this. Upon this shoal a great proportion of these little boats upset. If the child is to be taught at home, it must be positively decided that lessons are to take precedence of a thousand various pleas of pleasure or necessity. Frequent interruptions are simply fatal,—fatal both to the desired habits and the hoped-for results. With three hours daily of close attention to books, it is surprising how much may be accomplished with a family of children. Build well the underpinning. Let all elementary knowledge be clear, precise, and thorough. With absolute thoroughness, every inch gained is a possession for all time. Not only is it so much ground conquered, but it is so much advanced upon the *road*,—complete mastery of a few simple principles will enable the mind to approach more difficult problems without confusion, and will render achievements easy which to many are only accomplished at an immense outlay of stubborn drudgery. This must be strongly insisted upon, since home-teaching is naturally discursive and may easily be superficial. On the other hand, it cannot too often be said that the work of education is not a mere matter of drill in text-books. The freedom of comment and illustration, which in class-drill is difficult and almost impossible, should not only aid in imparting much general information, but promote breadth of view and power of individual judgment. Scholarship, to a degree of high technical excellence, may demand other aids; the teacher may be herself unable to go far in the sciences, in classical or linguistic studies, and yet she may be quite capable of imparting an education not to be despised.

To begin with the knowledge of English: that is, in itself, an almost inexhaustible study, and one that may be pursued to especial advantage in a home education. If I may trust the report of more than one college professor, who has assured me that young men enter college whose spelling is "disgraceful," this seems to be a study not generally followed with very great thoroughness, even in its elements. The habit may be formed, even with very young children, of looking at every word *critically*, which soon makes it impossible to mis-spell any ordinary word. There is no need, at home, of being satisfied with a dry and barren knowledge of grammar and etymology. The reading of leisure hours must all pay tribute to the teacher. Aim at a vital knowledge, a command of clear and flexible English for the student's own purposes. Discourage mere memorizing in the preparation of all lessons. Take the concise facts of the text-book and put them picturesquely, and in different lights.

Children taught in this manner will soon show an appreciative interest in the best literature, and will readily gain, with the appetite, a knowledge of the outlines, at least, of these inexhaustible stores. Let children get some knowledge of history, as a skeleton sketch of the story of man ; not a confused mass of disconnected fragments, but a coherent whole. They can fill out the various periods for themselves, in after-years, as time and taste serve, but the great salient points of the story, the chief epochs and figures, should early be made real and vivid for them.

Any attempt at education falls far short that does not give some intelligent notion of the great lines of human thought and endeavor. A little knowledge of the rudiments of a great science may be a good thing if the young person who possesses it understands fully the slightness of the acquisition,—that it merely gives entrance to a truth which to follow will take a life-time,—but she ought to be incapable of the flippant folly of such remarks as we sometimes hear: "Oh, I have *finished* chemistry, astronomy, geology!" Such acquirements as we have hinted at, with that knowledge of books which prepares one to use them, which makes a great library a storehouse of *tools;* these, helped by a sense of proportion which gives one a grasp upon facts and theories alike,—a capacity for fitting them into their places so that not one shall overshadow another or be lost in undue subordination ; such an education, modest indeed in its aims, but not without solid value, is easily attainable at home under the charge of an intelligent mother. If practical efficiency has been at the same time developed; if the scholar has thought upon his own relations to the problems of support and usefulness, and has been almost unconsciously helped to find some channels, more or less swift, of honest, productive efforts, it will probably compare favorably with the usual routine.

ELEMENTARY COMPOSITION IN PRIMARY SCHOOLS.

BY MISS E. A. FANNING, NORWICH, CONN.

The teachers of the past erred in undervaluing the importance of composition, and in not recognizing fully, if at all, its relation to the other studies, however elementary, which they were teaching. As an inevitable result, from such mistaken ideas came delay and a total ignoring of the subject until, after a waste of the best years of school-life, the branch suddenly developed into importance and the scholar's mind was expected to furnish a complete edifice of rhetoric where no foundation of thought and expression, however simple, had ever been laid. Even here another mistake was made, not only in subjects given, but in the practice of enforcing reliance in, and withholding aid from, pupils who, lacking experience, could hope for the awakening, development, and proper expression of ideas, only from the suggestions of teachers, supplemented by the information to be gained from reference-books and from their own reading. What wonder, then, that composition became the bugbear of school-life!

The reason why the language-lesson may not be made one of the most important studies, as well as *the* most fascinating one, of the course has yet to be proved. It is certainly productive of vast benefit; since,—in the primary grade,—it is the only plain and certain test we have of the proficiency of pupils in independent writing and spelling. Every teacher knows that a pupil in the lower grades who may, perhaps, copy a set word or phrase with Chinese fidelity will be perfectly at sea,—so far as *correct* writing is concerned,—when bidden to write a paragraph unaided. As for teaching such children spelling by simple repetition of words, the result is about as satisfactory as was Penelope's web, of which as much was unraveled every night as had been spun during the day. If primary teachers wish to see any practical, satisfying results from their perplexing labor, day by day, they must commence by making copy-books and oral spelling of secondary importance.

Although we had been doing some desultory and tentative work in language in our primary course previous to the last year, it was not until then that the subject was given prominence in our scheme of study, as necessary and practicable. Even then I regarded it as a pleasant device for promoting interest and variety, rather than as the probable source of large benefit to my class. Up to that time the pupils had been writing simple descriptions of ordinary pictures.

But as nine out of ten of their slates would read: "I see a picture. I see a horse. I see a man. I see a dog by the man," I concluded to try a change. So I commenced to *draw* the subjects of their exercises, first letting them talk about the picture, which I took good care should be of some very familiar object. I prefer this of all plans which I have tried. It adds a thousandfold to the pleasure and interest of pupils to watch an outline,—however imperfect,—grow into shape before their eyes. There is a freshness, a newness, about it which never belongs to a printed picture. Occasionally, as time went on, they were permitted to write independently of pictures, their subject being some suggestive word written upon the board, as, "Christmas," or "Sliding." At other times they wrote entirely from memory; as recollections of stories which they had heard or read (but this, of course, was at best a limited field), or letters to their parents or to myself. In no case,—no matter what the scholar's rank in any other study,—did I ever discover *poverty* of ideas in the exercise. The first and most discouraging obstacle to success was spelling; the second, the inability of pupils to express their ideas rapidly and easily in writing. As a rule, children's fingers are rarely able to keep pace with their brains. And this is an end which can only be attained by patience on the teacher's part, and experience in writing and spelling, on theirs.

Whatever method of conducting the language-lesson I have chanced to select, whether by writing from ordinary pictures, from drawings independently of pictures, or from memory, I have always employed the same aids to spelling. My first plan was to draw the picture-subject, and to write its name both as the title of the little story and to insure proper capitals; then to write upon the board the principal and necessary words relating to the picture, numbering them as they were written. By this practice of copying, correct spelling was promoted, while the numbers saved time and trouble, since pupils might be instantly referred to the corresponding number when uncertain as to the spelling of a particular word. Then I have encouraged freedom of inquiry relative to the spelling of every uncertain word, both as an aid to the pupil who asks as well as to those who listen. Again, much good may be gained by encouraging reference to text-books, not only as insuring accuracy in copying and spelling, but in serving to keep the pupil's mind alive not alone to the *peculiarities* of new words which he learns, but to their position in the book,—to the very page, the line even, in which they occur. I fail to see why it is not quite as important for a primarian to develop a keen perception of relations in respect to the words of his reader as it will be for him, ten years hence, to see analogies in his mental philosophy, or to recognize instantly a case of parallelism in his Æneid.

The fourth aid to spelling requires more time than the three preceding ones. My practice has been to divide a slip of paper by a line, upon one side of which the pupil writes the uncertain word, *always followed by a question-mark.* He comes to me without asking permission, and if his word is correct I return the paper without comment; if not, I write the correct form opposite his attempt. The name of each pupil is written upon his paper, which he keeps, drawing a line under the uncertain words of each lesson; which words he is afterward required to re-write correctly five or ten times, as the case may be, at odd moments of leisure.

Some one may suggest that all this takes time, and that, after all, learning to write stories is not of primary consideration in the education of mere infants. The very same objections have weighed heavily upon my own mind at times, and I have frequently hung out various small signals of warning to myself, fearing lest I might make this subject a harmless kind of hobby. How I got rid of my scruples was simple enough. There are sixteen pupils in my class whose ages average 7½. Now I am positive each pupil has spelled and read and seen the simple word "there," at the least calculation, fifty times. Yet day after day the word was written "t-h-e-i-r," or "t-h-a-r-e," and no amount of simple correction seemed equal to effect any improvement. One day in particular, one of the boys,—a smart, bright boy, too,—wrote, "Thare is a turtle on the board; A turtle *bees* in water." And I commenced to ask myself, "Is there any help for this thing? Is there any means of remedying these errors of spelling and language? True, experience would do the work, later on; but could not I anticipate the office of experience now, this year, this term even?" The question was, How could that particular boy be made to realize the errors of his sentences, in order to perceive and avoid them for the future? His experience of the uses and relations of those and all other words would necessarily be distributed thinly over a period of many years. Would it not be possible to gather up, to concentrate and compact, this experience into a single year? If so,—and I answered "Yes" to my questions,—by what so natural, simple, yet efficacious means as that of practice; of doing again and again, until at last thought and judgment would step in and take the work out of my hands? I saw at once that, to prove of the desired effect, the exercise must be done *frequently*, done *repeatedly*, and, as a consequence of limited time, done *with despatch.*

So, like Robinson Crusoe, "I put my mind upon thinking," and having considered the *pros* and *cons*, I decided to try an experiment.

So at the next lesson, having drawn the picture, I said, "Scholars, I want you to write me a story of eight lines; I shall call for it in fifteen minutes." I explained that this was exclusive of their names and ages and the title of the story. They set to work with an accession even of the delight which they always take in this exercise; and the stories were written and corrected inside of half-an-hour. Certainly a moderate allowance of time to devote to a language-lesson. This plan I have followed ever since, although I have reduced the acceptable least number of lines to six. Since that time I have found in general a steady improvement in economy of time, in writing and spelling, and in facility of expression. The practice of noting the lines helps them in paragraphing, as well as in determining the placing of capitals. Of course some of the class will attempt to slur their writing; while others, using a stenography of their own, will make a single word stand for a sentence. However, it is, perhaps, as natural for a child, hurrying on to the expression of his thought, to leave out all except the important words in writing, as it was for him in his earlier childhood to omit the copula and articles, and say,—intelligibly to himself and his hearers,—"Book pretty," or "Sugar sweet."

In order to cultivate *correct expression* of ideas I have made a practice of looking over the pupils' work during each exercise, and of causing each improper and ungrammatical sentence to be read aloud, in order to encourage careful work and *self*-criticism (children are always sufficiently venomous critics of each other). The most difficult habit to cultivate is that of looking back, of re-reading the work already written. But that of course will come with time. Such expressions as, "They are a picture on the board;" "My father give me a sled a Christmas;" "The teacher leave me take a purty book," occur, of course, in every lesson. But we cannot expect elegant English from the majority of pupils who daily hear such expressions as, "Johnny, git that air book o' yourn, and jest you make tracks for school!" or, "Mary Ann, if you spile your ruffled apron with ink, yo'll git the wus lickin' you ever had'n your life!"

As to corrections in *spelling*, sometimes pupils are simply required to re-write mis-spelled words ten or fifteen times; while in cases of very poor exercises the stories are entirely re-written.

My corrections are always made with colored ink; and, when practicable, each incorrect word is fully written out. Of course, even with the wisest application and economy of time, progress is comparatively slow, and days come when good results are almost imperceptible, and and there seems no resource but persevering, hopeful, prayerful patience.

Mr. Sprague was born at Sutton, Mass., Oct. 19, 1829. He fitted for college at Leicester (Mass.) Academy, under the tuition of Rev. Josiah Clark, and entered Yale College in 1848, resident at East Douglas, Mass. The first year after graduating he studied law in the Yale Law School; the next year in Worcester, Mass. In October, 1854, he was admitted to the bar in that city, and entered upon the practice of his profession. He accepted, in September, 1856, the position of Principal of the Worcester High School, which he held till January, 1860. In 1859 his *Fellowships of Slaveholders* was published and circulated in pamphlet form by the Pennsylvania Anti-Slavery Society. Soon after, he removed to New Haven, Conn., and for a few months had charge of the "Webster School" there. He then resumed the practice of law, but when the war began he engaged heartily in the enlistment of soldiers. In the summer of 1861 he enlisted about sixty men for a company, who elected him captain. Declining this office, he raised, the same year, another company, of which he became captain in the 13th Regt. Conn. Vols., and went with it to Louisiana. In April, 1863, he was wounded in the arm in the engagement at Irish Bend, La. In June he volunteered as one of the leaders of the "Forlorn Hope" for an assault on Port Hudson, which, however, proved unnecessary, and in November of that year he was promoted to be Major and then Lieut.-Col. of his regiment. He was afterward breveted Colonel for gallantry at Port Hudson. He had previously declined the command of a colored regiment raised in Louisiana; was commissioned Colonel of the 11th Regiment, C. D. A. He was taken prisoner at Winchester, Va., Sept. 19, 1864, but was released after five or six months' captivity. His last military service was performed in Georgia, and terminated April 25, 1866, when his regiment was mustered out at Fort Pulaski,—the last Connecticut regiment to be discharged. A few months later he was appointed Principal of the Conn. State Normal School, at New Britain, of which he took charge Sept. 18, 1866. The next year that school was, by a hostile legislature, suspended for one year. In 1868 he was chosen representative from the town of New Britain to the Legislature of Connecticut, in which body he was House Chairman of the Joint Standing Committee on Education. The educational legislation of that year was peculiarly important and progressive, and the chairman of the Committee took a leading part in procuring it. He succeeded in reëstablishing the State Normal School, in abolishing the odious rate-bill, thus making the schools for the first time free; and in trebling the appropriation for teachers' institutes. The same year he was elected Professor of Rhetoric and English Literature in Cornell University, and held that position two years. In 1870 he became Principal of the Adelphi Academy, of Brooklyn, N. Y., and remained there till 1875. His Inaugural Address on

Education at the Adelphi Academy was printed in pamphlet form. In 1873 was published his address on "Coëducation," at laying the corner-stone of Sage College, Cornell University. In 1874 he received the degree of Doctor of Philosophy from the Regents of the University of New York. In September, 1876, he became Head Master of the Girls' High School in Boston, Mass., where he still remains. He has prepared and delivered many public lectures; among them one on "John Milton as an Educator," two on Shakespeare, one on Oliver Goldsmith, another giving his experiences as a prisoner of war; also one entitled "Riches, and What Constitutes Them." He has published a *History of the 13th Connecticut Regiment*, and a volume of the *Masterpieces of English Literature.*

In July, 1878, he established the remarkably successful Martha's Vineyard Summer Institute, of which he was President till he resigned a short time before his departure for Europe in 1882. He has published an annotated edition of Milton's "Lycidas and Comus," and of parts of Irving's "Sketch Book." In October, 1879, he edited, for school use, the first two books of "Paradise Lost," with diagrams and copious notes. In the same year his address on Free Text books was published by the vote of the Massachusetts Teachers' Association. In November, 1880, at the dedication of the Free Library Building in West Brookfield, Mass., he delivered an address which was published by the town in pamphlet form. In 1882 his article on Societies for the Suppression of Vice, published in EDUCATION, was similarly reprinted for circulation by the Cincinnati Society. For three years he has been President of the New England Society for the Suppresssion of Vice.

He has also found time to invent and patent a windmill, which received the first premium over several competitors at the exhibition of the Massachusetts Charitable Mechanics Association in 1881.

Mr. Sprague has delivered many Memorial-day addresses, Fourth-of-July orations; also many lectures in aid of educational, religious, and charitable enterprises. He has just been elected President of the American Institute of Instruction.

EDITORIAL NOTES.

A MOST valuable work in American history has been undertaken by Dr. Herbert B. Adams, associate professor of history in Johns Hopkins University, through the publication of a series of historical and political essays relating to municipal townships and local government in the various States of the Union. Already several interesting studies have been prepared, and a large number are under way. The plan includes the origin and development of American institutional life through every department of government, education, and philanthropy,— a veritable atlas of the inner life of the American people, showing from what sources its great streams of influence have flowed in, how every race and nationality has contributed to the present type of civilization, with the attempt to forecast the future, especially of the new South and South-west. One important result is the waking-up of an intense interest in American historical investigation among the class of forty young men now under instruction by Prof. Adams. A recent interview with this interesting group of students, representing many States, enabled us to bear testimony to the growing interest in Southern education among great numbers of our promising young men. Professor Adams has done a valuable work in the history of education by the publication of an admirable study concerning the original donation of public lands by the colonies of Virginia, New York, Massachusetts, and Connecticut to the General Government, and the dedication of these vast tracts of public domain to the new States in the interest of free labor and free schools. The same pamphlet contains papers on the real-estate transactions of Washington, and his broad views and persistent efforts in opening communication between the Atlantic seaboard and the West.

THE Rev. A. J. F. Behrends, of Providence, R. I., delivered an address before the American Institute of Instruction at Saratoga, July 13, 1882, on "Religion in Public Education," which has been re-published in pamphlet form, and deserves a wide circulation. Dr. Behrends is one of the increasing class of clerical gentlemen who seem competent to look at the vexed question of religion in public education from a human and patriotic, rather than a narrow ecclesiastical, point of view. He recognizes the inevitable conditions of the support of any system of public education that will command the permanent confidence of the American people. Such a system must be under the control of the whole people, and not of the Church, in any or all its denominations. It must recognize the fact that the American people, as a body, believe in the providential government of

Almighty God, in the morality of the New Testament and in the Holy Bible, as the great handbook of righteousness in private and public life. These convictions are a vital part of American civilization, and can no more be kept out of the school-room than the common air and light. The attempt of Bishop McQuaid and his party to break up the public school and remove the children to the charge of their ministers for education, will never meet the response of any but a small portion of the people, and even they will repudiate this scheme after fair trial, as antiquated and impracticable. The counter proposition, represented by Mr. Robert Ingersoll, that all mention of religion, or morals as related to religion, or all use of the Bible, shall be put out of the public schools because a small minority of the people believe in neither is equally impossible, as it would establish in the school-room a dogmatism of unbelief even more intolerable than the bigotry of any priesthood. Dr. Behrends sees clearly that moral teaching and discipline in public schools is a practical thing, and when gone about in a practical way is involved in none of the insurmountable difficulties that worry the theologians. It begins in the life and example of the teachers, is materialized in the organization and discipline of the school, and goes on in the most natural and beneficent way, following the current of every-day school-life. There is no doubt that our superior public schools are one of the most powerful agencies in character-training, a most valuable ally of the family and the church, and indispensable to that discipline in public morality, so needful in our order of society. Dr. Behrends has little confidence in the proposition of certain bodies of Protestant clergymen to prepare a manual of morals for public schools. Once attempted, this would result in a multiplication of moral text-books, representing every sect of moral belief and disbelief, and "the last end would be worse than the first." The wisest thing our clergy of all denominations can do is to heartily engage in the great enterprise of building up the people's common schools, not in their professional capacity, but as citizens, with a common interest in the welfare of the Nation. Working in this way, they cannot fail to exert a most powerful influence for good, on the side of religion and morals, in the public schools. But any attempt, from any quarter, to bring public education under ecclesiastical tutelage, or to deliver it into the hands of an unreligious secularism, will react upon its movers and be rejected by that common-sense in things moral and religious which, with all their popular sins and follies, has always been and will remain the saving grace of the American people.

In a late number of the *Century* magazine, Mr. W. L. Tomlins, of Chicago, contributes a valuable article on the training of children's voices in singing and speaking. Mr. Tomlins, according to the testimony of Mr. Theodore Thomas, has made a notable success in Chicago in the very difficult undertaking of eliminating from children's voices in singing and speaking that frightful roughness and sharpness which so often brings the recollection of the warwhoop of the savage into the drawing-room and the play-ground. By fixing a reasonable limit to the efforts of children, Mr. Tomlins, according to the highest authorities, secures an agreeable style of singing and preserves the voices from premature destruction. On one point Mr. Tomlins seems to us to have struck an idea of radical importance. Not one teacher in a thousand makes a serious attempt to suppress the the awful screeching, yelling, and "yawp" of the average child on the school play-ground. We are convinced that multitudes of children thus form a habit which impairs their voices through life. Here is a great opening for wise administration in the endeavor to train the voice in speaking in a way that will make conversation a pleasure instead of an affliction with the majority of people.

THE old State of Kentucky, just now, is moved by a great revival in behalf of universal education in public schools. An important committee of distinguished men from all parts of the State has been chosen at a recent convention, to watch the educational make-up of the coming legislature and give effect to the new school-laws indorsed by the people. This is the vital point, to-day, in educational progress in the South. A southern legislature, by the very distribution of population, is apt to be composed largely of the representatives of the people who inhabit the open country. The progressive young men are crowding the cities and towns which, in many cases, are a generation ahead of the rural districts. Thus, while the representatives of the new urban life are often among the most enlightened people, and demand measures favorable to all sorts of improvement, the average member from the country seems chiefly concerned to shield his constituency from taxation and resists every suggestion of a liberal policy in directions where it is most needed by the State. Thus, the contrast between the school-life of the growing towns and the country is simply inexplicable to any man who does not remember these facts. But every southern rural neighborhood contains a few people of large influence who can do great things in waking up their locality, and this movement in Kentucky, to enlist the most influential leaders of public opinion, in every part of the State in behalf of educational reform has a promise of great good.

FOREIGN NOTES.

GREAT BRITAIN. —*Secondary Education.*—We hear so much of the great "public schools" of England that it is difficult for us to realize that secondary education is within the reach of but a small proportion of the youth of Great Britain. The subject has received much attention from the Education Department during the past year. The Education Endowments [Scotland] Bill, which was pushed with so much energy by Mr. Mundella, will increase the means of secondary education in Scotland. The Endowments Bill went into operation Nov. 1. The circular addressed by Mr. Mundella to the Welsh Boards of Education with reference to the establishment of higher grade Board-schools has accomplished some practical results. In England, Leeds, Manchester, and Bradford have established schools of the higher grade, and the new School Board for London will doubtless proceed at once with the same work in the metropolis in accordance with a resolution that passed the late Board by a large majority.

In this connection it is interesting to observe what is being accomplished by scholarships which enable youth of exceptional ability to pass from the elementary school to some place of secondary education, and thence to the university. There are 49 such scholarships in the control of the School Board for London, 30 at the disposal of the Liverpool Board, and a less number at Manchester, Birmingham, and other towns. A single example will illustrate their importance. In 1873, Mr. Barker, a scholar in one of the schools of Marylebone, gained the Mortimer Memorial Scholarship, the first placed at the disposal of the London Board. He proceeded at once to the City of London School, where he took numerous prizes. In 1879 he gained a Foundation Scholarship as Trinity College, Cambridge, and here in 1881 he achieved the first place in the first class in the "First Classical Tripos Examination."

Training Schools for Teachers.— Among secondary schools must be classed Training Schools for Teachers. Until a recent date pupil-teachers have been trained by the head masters of the schools in which they served. Schemes for the central instruction of pupil-teachers are now being adopted in the leading cities, and the result promises to be a class of institutions resembling somewhat our normals which have a course of one or two years. Great activity is also manifested with reference to the training of teachers for secondary schools. The College of Preceptors has recently been able to increase its provision for this work through the liberality of the Stationers' Company, who have thrown open their well-known school in Fleet street, as a practice school, to a selected number of students from the College Training Class. It is hoped that other secondary schools in London will follow the example. Finsbury Training College, for those who intend to become masters in middle and higher schools, opens Jan. 17,

Universities.—The new statutes under which Oxford and Cambridge open this year introduce organic changes. The college pays tribute to the university; the latter, in acquiring substantial revenue, acquires also substantial power. The bearing of many of the changes cannot be understood without a careful study of the statutes; the permission to marry now accorded to Fellows will transform the social life of the universities. It is reported that about 40 per cent. of the incumbents have availed themselves of the gracious privilege.

The progress of science in the universities is watched with deep interest. At Cambridge the lists of the Board of Studies for the first time include the separate Boards of Physics and Chemistry, and of Biology and Geology. A number of the Cambridge colleges offer scholarships in natural science.

At Oxford, Dr. Burden Sanderson has been elected to the new chair of Physiology on the Waynflete foundation in connection with Magdalen College. Balliol and Christ Church have offered scholarships in Natural Science for the present term. and Queen's College will follow their example in the ensuing term.

Royal University, Ireland.—Unusual interest attended the first act of conferring degrees by the Royal University of Ireland, which ceremony took place lately. This university marks an era in the history of education in Ireland. It was founded in 1879 and chartered in 1880, with power to examine for, and to confer, all such degrees as can be conferred by any other university in the United Kingdom, degrees or other distinctions in Theology excepted. No residence in any college, nor attendance at lectures in the University is obligatory, except for degrees in medicine and surgery. The University, it will be seen, removes the disabilities from which the higher education of the Roman Catholic youths of Ireland have heretofore suffered. The privileges of the University are extended to women.

Miscellaneous Notes.—The first practical result of the preliminary report of the Royal Commissioners on Technical Education promises to appear in Manchester. A deputation was sent from that city to examine into the operation of the primary schools in Paris in which manual intruction has been introduced as described by the Commissioners. The deputation has made a report to the School Board, in which they recommend that manual occupations be introduced into one or two of the Manchester schools by way of experiment. They also urge the adoption of better methods of instruction in drawing in day and evening schools. With reference to evening schools they say, "Numerically the evening classes under the Manchester School Board are much in advance of the evening classes of Paris, as compared with the population of these cities; and in all the subjects, excepting drawing, our students, as far as our own observations extended, are fully on a par with the French."

The Biological Station at Sydney has been completed, and The Royal Society of New South Wales has granted to the same the sum of £25 from its funds, which grant, it is expected, will be repeated from year to year. The Royal Society of Victoria have also promised an annual sum, and the Australian Biological Association will also probably be in a position to grant an annual sum to the Sydney Station. Further subscriptions, however, are still required, and will be thankfully received by the treasurer. The station is open to biologists of the male sex, irrespective of nationality, on payment of a small weekly sum to meet the expenses of service, etc.

At a recent council-meeting of the Royal Agricultural Society, Lord Moreton, chairman of the Education Committee, reported that nine scholarships of £20 each had been gained by pupils at Bedford, Surrey, and Devon county schools, and on the motion of his lordship it was resolved to set aside a sum of £500 for the purpose of promoting agricultural education during the ensuing year.

Captain Aylmer, M.P., has written to the Prime Minister, inclosing a memorial on the subject of a proposed Royal Commission on Irish Industries. Captain Aylmer points out that the request for the appointment of the Commission is supported by a large number of Irish members,—Liberals, Conservatives, and Home Rulers alike.

The increasing anxiety as to the physical condition of school-boys has led the Prussian Minister of Education, von Gössler, to decide upon compulsory physical training. The Minister has recently issued a circular on the subject of games for German boys, advocating, among other out-door exercises, cricket and football.

FRANCE.—*Secondary Education.*—In July, 1880, the law creating the fund for lycées and colleges was passed. Since that date the sum of 38,000,000 francs has been appropriated for these institutions, of which 10,000,000, about $1,900,000, have been exclusively for lycées for girls. The law establishing this grade of instruction for girls was passed Dec. 21, 1880, since which date 26 towns have determined to adopt the measure. Paris has not responded, but seeks to accomplish the same end by means of superior primary schools. The municipal authorities are evidently not disposed to coöperate with the General Government in the support of institutions which must be submitted to the control of the latter. The most earnest advocates of the law of 1880 desired that the lycées for girls should be placed upon the same footing as those for boys with reference to admission, length of course, and test examinations. Public sentiment does not seem to favor so radical a measure, and the "Superior Council" has issued decrees adapting the law to the prevailing demand. Instead of nine or ten years course as in the lycées for boys, five years are assigned in the case of girls, and this term is virtually shortened by the examination allowed at the end of the third year, which secures a "certificate of secondary studies." Colleges for girls have been opened at Grenoble, Auxerre, and Lons-le-Saulnier, and lycées at Montpellier and Rouen. The three colleges numbered last July 346 scholars, and the lycée of Montpellier, 96. The lycée at Rouen was inaugurated Oct. 1, 1882. Minister Duvaux made the address. In accordance with a report by Minister Duvaux President Grévy issued a decree Oct. 10, establishing a scholastic council in each of the lycées of the Republic. This council, consisting of the chief of the institution and a representative of each of the faculties, will decide upon the courses and the conduct of the studies.

An order has been given by Bishop Dupont des Loges that once every Sunday a sermon shall be preached in German in all the churches of the Metz diocese, and that henceforth the instruction in the Metz ecclesiastical seminaries shall be in German, as well as in French.

A committee has been formed in France to erect a national monument to Rousseau, who is styled, "The immediate inspirer of the declaration of the rights of man, the proclaimer of the sovereignty of the people, and of universal suffrage, and the reformer of education in the sense of nature and of reason." Among the names on the committee are those of Carnot, Louis Blanc, and Henri Martin. The Parisian press does not heartily favor the project. Its verdict is, "No one now reads Rousseau."

Sept. 5 being the 25th anniversary of the death of the philosopher, Auguste Comte, his followers held their usual commemoration of his memory. In the afternoon a meeting was held at the former residence of Comte, where his successor, Pierre Laffitte, gave an address mainly devoted to the institution of a systematic scientific education.

Paris maintains free evening schools of two classes: (1) special art classes; (2) classes for commercial instruction. There are, at present, it is stated, about 2,000 students in each class of schools, or in all about 4,000 evening pupils out of a population of more than 2,000,000.

About forty male pupils of the Parisian public schools who have taken honors have been sent on a visit to London. The Société Nationale Francaise have made arrangements for their board and guidance. The same number of laureates were sent to central France.

GERMANY.—At the fourth Congress of German educators, the following, among other resolutions, were adopted:

> The social standing of the teacher is affected unfavorably by his exclusion from the corps of inspectors, by his exceptional position with reference to the military service, and to the electoral right.
>
> The best means for developing technical skill to the advantage of German ministries will be found in the increase of the number of professional schools properly called special schools (*Tachschulen*).

The Congress did not decide in favor of school savings-banks. Recent statistics give the number of school savings-banks in Germany as 491, having 50,381 depositors and 1,421,902 marks deposit. School savings-banks established in several villages of the Harz district have apparently been of great advantage to the poor villagers. The number of depositors and the amounts deposited have increased from year to year. Thus in Drehsberg a bank was established Dec. 2, 1878. The number of depositors the first year was 30. In 1882 there were 43, and the total deposit was 801.20 marks.

PRUSSIA.—The Minister of Public Instruction has called attention to a law, not enforced of late, which provides that no person shall be admitted to a normal school, and later to the position of teacher, if a medical examiner pronounces him unhealthy or of small chest development. This measure has been revived on account of the great number of young men of delicate habit who seek admission to the normal schools.

A commission has been appointed at Königsberg to examine candidates for teacherships of handiwork for girls in the province of East Prussia.

The Statistical Bureau of Prussia has just published a work by M. A. Petersilie upon the status of primary schools in Prussia in 1878. In the absence of education reports, this is the latest official information upon the subject. The number of public primary schools, including 110 attached to normal schools, is stated as 33,059, with 60,307 classes. Of the whole number of schools, 23,000 consisted of a single class. The total number of teachers in the primary schools, not including those attached to the normals, was 59,493; to these must be added 27,334 assistants, of whom about 24,000 were special mistresses for needlework. The total number of children of school age was 4,272,199. Of the totals given, 3,915 schools, 20.574 principal teachers, 4,186 assistants, and 1,273,993 children of school age belong to the cities. A little computation will show that there remain for the rural districts 38,919 principal teachers and 2,998,206 children of school age, or 1 teacher to 77 children. The annual expense for primary education, as determined by calculations for three successive years, from 1876 to 1878 inclusive, is for all purposes,—teaching-force, school building, etc.,—101,016,623 marks, or $24,041,956.27. This represents a per capita expense of about 90 cents, estimated upon the population as here reported; viz., 26,647,600.

AUSTRIA.—There are in Austria, deducting the children below the legal school-age, 6,428,731 illiterates out of a population of 38,000,000. Of the number of illiterates, 3,461,170 are women. In the province of Bohemia the illiterates number 151,905 men, 248,487 women. For the scholastic year 1881, Bohemia counted 4,383 popular schools having 10,021 classes, and 126 burgher schools with 509 classes. The teaching force for all these schools numbered 12,999 persons and the pupils 901,377, of whom 115,519 received their instruction gratuitously. A committee of teachers has been formed at Gratz to arrange plans for a permanent school exposition.

A report bearing date 1882, presented recently to the Upper House, gives the total number of teachers in the diverse provinces of the monarchy as

31,817, of whom 26,413 are men, and 5,404, women. The eighth general Congress of Austrian teachers was held from the 3d to the 5th of August at Reichenberg in Bohemia. At the session of the Congress an association of the editors of pedagogic journals in Austria was formed upon the model of that which exists in Germany. Four journals joined the Association. The program adopted comprises the following points: Advocating eight years' obligatory instruction; abolition of local inspection; inspection proper confided to men especially qualified for the service; abolition of secret reports; abolition of the imperial depot of school-books; reform of the censorship of school-books; creation of school-gardens.

RUSSIA.—The *Official Messenger* of St. Petersburg announces that, "by order of the Emperor, the admission of new pupils to the course of medical training for women at the Nicholas Military Hospital will be discontinued after the present term. The students will be allowed to conclude their course, after which the clinical instruction for women at the hospital will be abolished." The Medical Academy for Women, the courses of which were quite equal to those of the old Universities, had 367 students. Since 1877, when the first lady students passed examinations, 281 ladies have completed the whole course of studies, and 152 had passed the examinations of M D.; 105 of them were in service at universities and in public hospitals.

SWITZERLAND.—Preparations are being made for a complete exhibition of the educational system of Switzerland in the exposition to be held at Zurich this year. One of the most interesting features of the exhibition will be furnished by the various industrial schools. In Berne, under the present law, handwork and industrial schools may be established by private individuals, societies, or communities. In 1880 there were in the canton 11 such schools, numbering about 450 scholars. They received government aid to the amount of 4000 francs (about $772). A late number of EDUCATION contained a brief account of the action with reference to the office of Secretary of Public Instruction. Advices since received at the Bureau of Education, inform us of the success of the endeavor to submit the decision of the councils to the *referendum* (popular vote). The minimum of signatures required by the Constitution is 30,000, and above 100,000 have already been secured. The educational condition of certain cantons would seem to be a sufficient reason for continuing upon the present basis which secures to each canton entire independence in matters of education. Thus Geneva has ample provision for free primary instruction, admirable secondary schools for both sexes, at which the fees are small, a gymnasium, a normal school, a well-equipped university, and schools of horology, design, bronze work, and chemistry, all maintained by the canton and city without help from the confederation. Geneva spends between $200,000 and 300,000 annually for public education.

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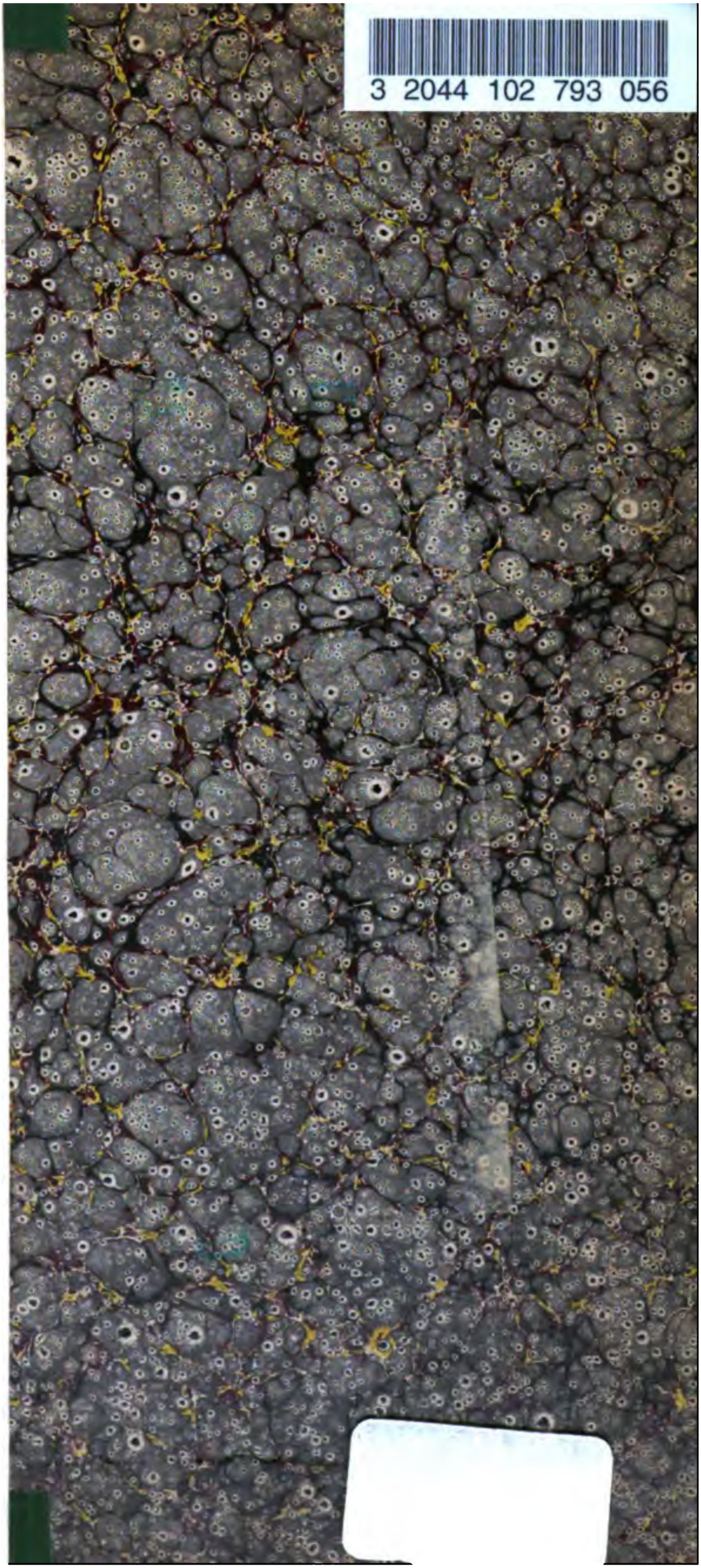

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